THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

Vol. IX. CHICAGO, OCTOBER 29, 1887. No. 18.

NINTH INTERNATIONAL MEDICAL CONGRESS.

ADDRESS DELIVERED BEFORE THE SECTION FOR DERMATOLOGY AND SYPHILOGRAPHY.

BY A. R. ROBINSON, M.D., L.R.C.P. & S., EDIN.

PRESIDENT OF THE SECTION.

It devolves upon me as Chairman of the Section of Dermatology and Syphilography, to perform the very pleasant duty of offering, on behalf of my American colleagues, a most hearty welcome to our foreign co-workers who honor us with their presence, and give us such fresh proofs of their deep interest in science by traveling so far to attend this meeting and to take an active and important part in the proceedings, although from our past history they must have very slight hope of any intellectual compensation from us. And whilst we do not promise them as warm a reception from the authorities who regulate our weather conditions, as, according to rumor, the wind organs from certain quarters promised them weeks and months ago, yet they may rest assured that we are very glad indeed to see them present, and whilst we recognize them as leaders, as representative men in our special department, the men who have done and are still doing real scientific work, and in whom we place much hope for future advancement of our knowledge of subjects, still altogether too numerous in this branch of medicine, of which we know almost nothing, we would also gladly have welcomed a greater number of their colleagues, and regret the absence of several who, from illness or other causes, are unable to be present, although most anxious to have come.

It is fortunate that the heat will not be so great as the false prophets promised, for, knowing the effects of high temperature upon the mental powers, and the amount of raiment one can wear under great heat conditions, and that these medical congress meetings are partly scientific and partly social in their character, it is evident that for a successful congress of this kind, the participants must be clothed and in their right minds. If the social part is a comparative failure, I trust that the mental food offered will be rich in valuable material. The American supply to past congress meetings has hitherto been an unknown quantity; for this meeting we already know the quantity, and will soon know the quality.

You, as specialists, are too familiar with the dermatological literature of America, vast in yearly amount, meagre in contributions, not to wonder why, with so many writers upon the subject, with so many dermatologists animated with that peculiar American quality called "push," we have contributed so little to the recent substantial advancement in our knowledge of skin diseases. But if we consider, as we now intend to do briefly, all the conditions under which we pursue our studies in this country, it will appear strange that good work is not even rarer than it now is.

Taught in colleges, the majority of which require only a two years' course of study, the sessions of each year lasting only five or six months, what inducement do such colleges hold out to their students to study medicine as it should be studied, if they are ever to be other than the blindest followers in the pursuit of our profession of the advice received from a few lectures or compendiums? Such a college course was, perhaps, not objectionable in colonial days, or when physicians were not a drug upon the public, as they may be said to be now, when every village is overcrowded, and continual efforts to get patients are necessary to enable the professional man to build up a practice, and at the same time, financially, to make both ends meet. It must be clear to the members of every teaching faculty in the land that a two or even a three years' course of study is quite inadequate to prepare a student—even if he be a student in the best sense of the term, bright and diligent—for the responsible duties of a medical practitioner; for the faculty is the examining body, and the superficial knowledge of candidates for graduation must be painfully evident to the professors.

Lectures upon special subjects are given in the majority of the colleges, and in some of them dermatology is considered as a special subject, in which case, one clinical lecture a week is usually given. As however, no examination upon the subject is required for graduation, the majority of students absent themselves from the lectures; but afterward receive their diploma, certifying to their knowledge of medicine in all its branches; although they may not have seen a single case of cutaneous disease, and could not diagnose an ordinary syphilide from an eczema; or even an elephantiasis from a scleroderma.

Afterward in practice, however, they treat all patients with cutaneous diseases without hesitation, as

a rule, and with the utmost coolness and outward appearance of confidence in their knowledge of the "rash," for to them it is a rash and nothing more. I am not blaming those general practitioners who follow this course; it is the legitimate result of the doctrine of the teaching body, for with only a two or three years' course it is not possible to devote time to subjects upon which they are not to be examined. Neither do these remarks apply to those general practitioners of whom there is quite a number, who have devoted post-graduate time to the study of cutaneous diseases.

But yearning after practical points—what drug to give for this or that disease; what is the best prescription for an eczema for instance—signs pathognomonic of imperfect mental training, and the lack of clinical experience, and of the information contained in good text books upon special subjects, bring about other evils which particularly concern us as dermatologists, and to which I will directly refer.

On account of the few lectures given upon skin diseases, and the short course of study required, it is not possible to learn dermatology in this country, except under great disadvantages at least. It is true that private instruction can be obtained at some dispensaries, and that regular clinics are held at some of the post-graduate schools; but for any extended knowledge of the subject a trip to Europe has hitherto been considered necessary. Vienna has usually been the Mecca for those who wish to specially study this subject, as the magnificent material to be seen at the Hôpital St. Louis has not drawn many students to Paris, whilst in London the patients are not used specially for teaching purposes, and consequently the advantages for studying the subject are not to be compared to those of Vienna.

How long the student, now a physician, remains abroad depends usually upon his ideas of the proper course to pursue, and the amount of money at his command. He should remain several years for the study of histology, pathology, morbid anatomy, internal medicine, bacteriology, and skin diseases, if he intends practicing afterwards as a specialist; but that is not the course usually pursued. He devotes too much time to learning the diagnosis and treatment of skin diseases, a course very proper for a general practitioner, but not for one who ever hopes to advance our present knowledge of cutaneous diseases; for who can expect to add to the descriptions of clinical symptoms as given by such acute observers as Hebra, Wilson, Tilbury Fox, etc., observers who have devoted their lives to the subject, and seen their thousands and tens of thousands of cases. I do not say that it is impossible to do so, but he has not a heavy heart or weak imagination who expects to make a reputation in that direction.

To combine, as is frequently done, the subject of cutaneous with genito-urinary diseases, instead of with internal medicine, is a serious error; for the two classes of diseases are in no way related to each other, and a knowledge of the one does not aid us in the study of the other; whilst every one must admit the close etiological relationship of many cutaneous diseases with internal pathological conditions.

Histology, normal and pathological, bacteriology, and general pathology hold the same relations to dermatology that they do to the other branches of medicine and surgery; that is, they are essential to the foundation of a broad view of the subject, and no one can fully discuss the etiology of the majority of diseases—that important branch of medical science which at the present time is studied more than any other—without some knowledge of them.

Whether the student remains abroad for a few months only or for several years, he receives the foundation of his dermatological knowledge in foreign lands; be that slight and dangerous, or broad and capable of being built upon, according to the time and brain energy spent. The majority of dermatologists at present practicing in America have obtained their schooling in dermatology in other countries, and as they continue afterward to be more or less influenced by the teaching received abroad, they may be called followers of this or that school, depending upon the country in which they studied.

A school can exist only when there is a comparatively great dermatologist in a given country, one whose views are more or less unreservedly accepted, and his teachings followed by his countrymen; or when the leading dermatologists of a country hold similar and peculiar views. As our knowledge of cutaneous diseases increases, and the number of dermatologists multiplies, there is more and more difficulty in founding a school, so that at the present time we are scarcely justified in speaking of a German, French or English school, for in all these countries eminent dermatologists, of whom there are always several in each country, hold very widely different views concerning the etiology, nature and treatment of the inflammatory affections of the skin, and it is upon the divergence of views in reference to this class of diseases particularly, that schools have existed.

As there is no particular centre for dermatological study in America, as there is no comparatively great dermatologist, and finally, as the majority of dermatologists have had their schooling abroad and hold widely different views on the inflammatory and other cutaneous diseases, there is no such a thing as an American school of dermatology; consequently, also, there cannot be a representative American dermatologist, for there are no special American views of dermatology to be represented.

This is specially gratifying to your Chairman; for, that being true, it logically follows that it cannot be said of him for the present occasion that he is not a good representative of American dermatology. As independent workers each of us represents but the character of our own labors, and if that is not creditable, the author is a corresponding dermatologist. If the work done by American dermatologists, as a whole, is to be represented, then the position should not be a difficult one to fill, for the average of that work is not astonishingly high, as shown by the articles in journals, and the reports of our special societies.

Returning from his European travels—"speaking a foreign language just as well as his mother tongue"—the would be specialist is beset by temptations to which he too frequently falls a victim. With more medical journals in the land than are necessary for the publication of papers that repay one for their perusal, there is, on the one hand, a demand for an article on some subject—it matters not what it be—by the editor; and, on the other hand, a desire to publish a paper by the specialist anxious for reputation and notoriety. The medical world at least must know that he is devoting special attention to a particular branch of medical science, and what plan so good as to write an article for a journal and, by means of reprints scattered broadcast, let the world know your specialty, name, and address. A few repetitions of this procedure will, without fail, bring patients to the office, and reputation among the mass of general practitioners. Why this latter is a result is not difficult to understand. As already mentioned, the college graduates usually have no knowledge of the so-called special branches, consequently any reprint—although it be only a compilation of previous articles by real workers—and very often they are even very poor compilations—appear to the busy practitioner to contain valuable information, and the author thereof as one having special knowledge of his subject.

This mode of action is a very serious evil, and must and does bring discredit upon the specialists in that branch as a body. It is to be hoped that the protest I now enter against this evil will not be in vain, and that in the future only such articles will be published as represent real contributions to the existing knowledge of the subject discussed. We still have so little real knowledge of diseases of the skin that there is a wide field for future observation, and the energy wasted in the compilation of these papers should be devoted to original and more creditable work. Let us show that American dermatologists have the spirit and ability to do their share of work for the advancement of our knowledge in their special branch of medical science. I do not wish to be considered as maintaining in this address that no good work has ever been done in this country, for that would not be correct—but it has borne no proper proportion to the number of articles which have been published; for too often the heading of a paper as a "contribution" to our existing knowledge of this or that disease has scarcely been justified by the contents.

As we learn most from a contemplation of our errors, I have endeavored to draw attention, as regards dermatology in America, to the faults of the colleges with reference to this branch, and the errors of action which we as specialists are liable to commit for our personal advancement, and have pointed out the way by which creditable reputation, if not pecuniary success, can always be attained.

Finally, in view of past events, I desire to express the hope that another International Medical Congress will not be held in America until the profession in this country have shown, by their actions, a change of heart; that they are prepared to subject the desire for personal gain to the proper, nobler and more honorable feeling for the advancement of medical science and consequent relief of human suffering.

ORIGINAL ARTICLES.

CLIMATE AND HEALTH RESORTS OF CALIFORNIA.

Read in the Section on State Medicine, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY J. W. ROBERTSON, A B., M.D.,
ASSISTANT PHYSICIAN AND PATHOLOGIST NAPA (CAL.) INSANE ASYLUM.

California has but recently attracted the attention of sanitarians. This tardy recognition was partly due to its isolation, partly to the fact that the Argonauts looked not at the sky, but at the earth and cared nothing for scenery, climate or a pure atmosphere. The Coast belt contained no gold, therefore they ignored it. Southern California, where now bloom perennial orange groves and the rarest exotics, they pronounced a desert scarcely able to support a meagre growth of sage brush and cactus, a fit habitation for the coyote and the squalid Troglodyte. Only recently has the fact been borne in mind that something is to be found more precious than gold, and from all over the world thousands of invalids flock here; they do not realize that California has a cosmopolitan climate adapted to all diseases that can possibly be benefited by change of air; that within its borders are to be found the altitude of the Alps, the scenery of Switzerland, the fruits of the tropics, numerous mineral springs which equal in value and are more healthfully situated than are those of the Eastern United States or Europe, the pure air of the Colorado Highlands and the winter climate of Florida; and that it is a nice question to always properly decide on that location best situated to relieve their particular disease. They do not always choose wisely.

Nor is this possible. Every town, every mineral spring, every sea-side resort, so loudly and so persistently bids for their countenance and so little reliable information outside of interested statements can be obtained, that they cannot intelligently select.

I shall attempt to briefly outline the essential features of our climate, to explain in what particular respects we claim pre-eminence for it, the rational of its therapeutic influence, and to mention those localities which are best adapted to certain classes of disease.

While the climate of California is mainly due to its situation midway the temperate zone, the remarkable uniformity of temperature is due to local causes. The great law that, in the Northern Hemisphere, all western coasts are warmer than the eastern, which is particularly well pronounced when the eastern is compared with the Western Coast of the United States. The mean isotherm of 50° which passes through New York, latitude 41° bears north-

ward as it crosses the continent touching the Pacific at Vancouvers Island, latitude 49°. Nature also draws isotherms in her distribution of trees and plants. While, on the Eastern Coast, 60° is the northern limit of Coniferæ they are found as high as 68° and 70° in regions adjoining the Pacific. It is then evident that the climate of California is much more temperate than that of the Eastern States, which are situated in the same latitude; but this does not hold true of Southern California. Here the conditions are reversed; San Diego, in the same latitude as Charleston, is 8° cooler. San Francisco and Washington, in the same latitude and having the same mean annual temperature, have climates very dissimilar, owing to the great difference between the mean summer and winter temperatures of Washington, which amounts to 40°, and the small difference in San Francisco being not over 12°. The mean annual temperature of Santa Barbara is 60°, San Francisco 55°, nor does it fall below this on the Northern Coast. In Crescent City, 300 miles north, the temperature is as mild as is that of San Francisco, frost and snow being of rare occurrence.

That this Coast Line, stretching through 8° of latitude, should have such remarkable uniformity of temperature, while phenomenal, is explained by the constant west wind which comes from the warm Japan current. These winds bear with them the uniformity of temperature of large masses of water and render the West Coast climate warm in winter and cool in summer. For this reason isothermal lines are, as they near the Coast, so deflected as to run North and South, and to mark out three climatic belts which I have named Coast, Valley and Mountain. This division has been generally adopted and from a therapeutic stand-point answers admirably.

The Coast climate extends several hundred miles North and South, and reaches from five to twenty miles inland.

The Valley belt, beyond the Coast range, commencing with Shasta valley on the North, extends down through the Sacramento and San Joaquin Valleys into the arid plains of the Mojave and Colorado deserts, while the Mountain includes the Sierra Nevada beyond. Rainless summers characterize all these regions.

That portion of California which has obtained the greatest reputation, which has filled the eyes of strangers with visions of a land where the orange and the vine flourish, where the tenderest plants grow unprotected, where it is neither so warm as to be sultry or so cold as to necessitate fire, where nature has so blended her charms as to hush the murmurings of the most fastidious invalid, is along the Coast and the adjacent country directly influenced by it. And this is of truth a wonderful region: A Coast line extending through 8° of latitude where snow is phenomenal and frost rare, where the mean daily, monthly, and annual temperature varies within a few degrees only, where the bright sunshiny days are the rule and sultry ones unknown, where the fresh salt air so invigorates as to prove an exhilerating tonic, and where flagging energies and a toneless system are revivified and thrown into a state of the highest tension, commands recognition. To every picture there is, and should be, some dark lines. In our enthusiasm we often forget to mention the fogs which float in from the ocean and enwrap us with a chilly embrace; that the breeze which so intoxicates us and which, by long habit, we have learned to call bracing, searches the marrow-bones of the unacclimatized and sends cold chills through the enfeebled frame of the invalid. This holds true of that region only which is north of Point Conception and is directly on the ocean.

Our boasted climate is only exemplified to the full in those places so far away from the Coast that the radiant heat will remove all rawness from the sea-breeze, or in those Valleys adjacent to the Coast but protected by the foot-hills.

The Japan current which hugs the Northern shores so closely, giving us a cool and bracing climate, does not exert the same influence south of Point Conception. This is partly due to its waters being heated by the more southern seas and a hotter latitude, partly to the fact that it is at this point separated from the main-land and pushed to the westward by a warmer current. The wind blowing over this no longer chills, but still exerts a decided influence. For this reason certain portions of Southern California possess a climate in its way unapproachable and not to be rivalled the whole world over.

So loudly, so ably and with such justice have its praises been heralded that to add were useless. Even here, it is well, in selecting, that some care should be exercised. Climatically speaking, the therapeutic area of Southern California is small. It is limited to those localities only which are directly influenced by the ocean breeze and extends but a few miles inland. In the Valleys back from the Coast, the summer heat becomes unbearable, there is but slight vegetation and good water is not easily procured. The winters, however, are said to be mild, dry and wonderfully invigorating. Only a few inches of rain falls and out-door life is practicable.

It is this region that first attracted the attention of sanitarians and gave California its greatest climatic reputation. Even now the majority of invalids look to Los Angeles as to a new Mecca, and with ever increasing wonder behold the mighty changes wrought by the hand of man, which for once have far outrivaled nature even in her most lavish mood. This climate speaks so strongly for itself, it is so mild and delightful that the most cariling cannot find fault and the invalid susceptible to the slightest chill, utters no complaint. For this reason it is taken for granted that it of necessity agrees. What is agreeable does not always agree. The climate of San Francisco, directly influenced by the cold ocean breeze, is not agreeable and makes but a poor impression on the visitor. Beyond all other spots along the Coast it is disagreeable, and all drawbacks to the Coast climate are here illustrated in extreme. This is caused by its location. The Sacramento and San Joaquin valleys here have their outlet. During the summer both are intensely hot and the rarified air, rising rapidly, forms a vacuum which the ocean breeze rushes in to fill. The

Golden Gate is indeed a gateway, presenting no obstruction, and the wind sweeps through it, across the bay and up the Sacramento and San Joaquin rivers with great velocity. During the early morning, and ordinarily, until near noon, the bright sky, the mild and bracing atmosphere makes one so tingle and scintillate with life that every nerve of the body and all the faculties of the mind are in a state of tension, and no more delightful form of intoxication can be imagined. When the interior valleys, warming up, begin to suck in the cool sea-breeze the gentle motion of the air adds a new delight. In the course of an hour, all is changed. It is no longer a breeze—it is a hurricane bearing everything before it that is ordinarily moved by such a force. Between the town and the ocean stretch several miles of sand-hills, and, fed by these, the streets soon become a swaying cloud of dust, fine sand and rubbish. On gala days when the sun shines on the interior valleys with unusual intensity, small gravel is added, that cuts like a whip and fills eyes, nostrils and mouth with a grimy coat. Strange to say the inhabitants soon become accustomed to this, and after a few months residence, this one drawback counts for naught against its more powerful claims for their approbation. Along the whole Coast the heat of the interior causes a like afternoon breeze, but except in a few localities where a break in the foot-hills gives it free sweep, is not disagreeable.

This climate is susceptible of subdivision; the one just described being directly on the Coast; the other, more moderate, but of the same type, a few miles inland and protected by the foot-hills from the full force of the breeze. Here lie many valleys with a climate equaling that of Southern California. Those which have become best known because of their proximity to San Francisco are the Livermore, Santa Clara, Napa and Santa Rosa Valleys. None of them are distant an hour's ride but because of their location, the afternoon breeze is shorn of all harshness. These are fast being occupied as summer resorts. The country is rolling, well watered and fertile, bearing grapes, fruits and flowers in great profusion. In summer the thermometer may register 70° or 80° at mid-day, but such heat is exceptional. The mornings and afternoons are never sultry, and the nights are cool. Nor is there any evening fog. During the winter frost occurs but rarely, and snow and ice are unknown.

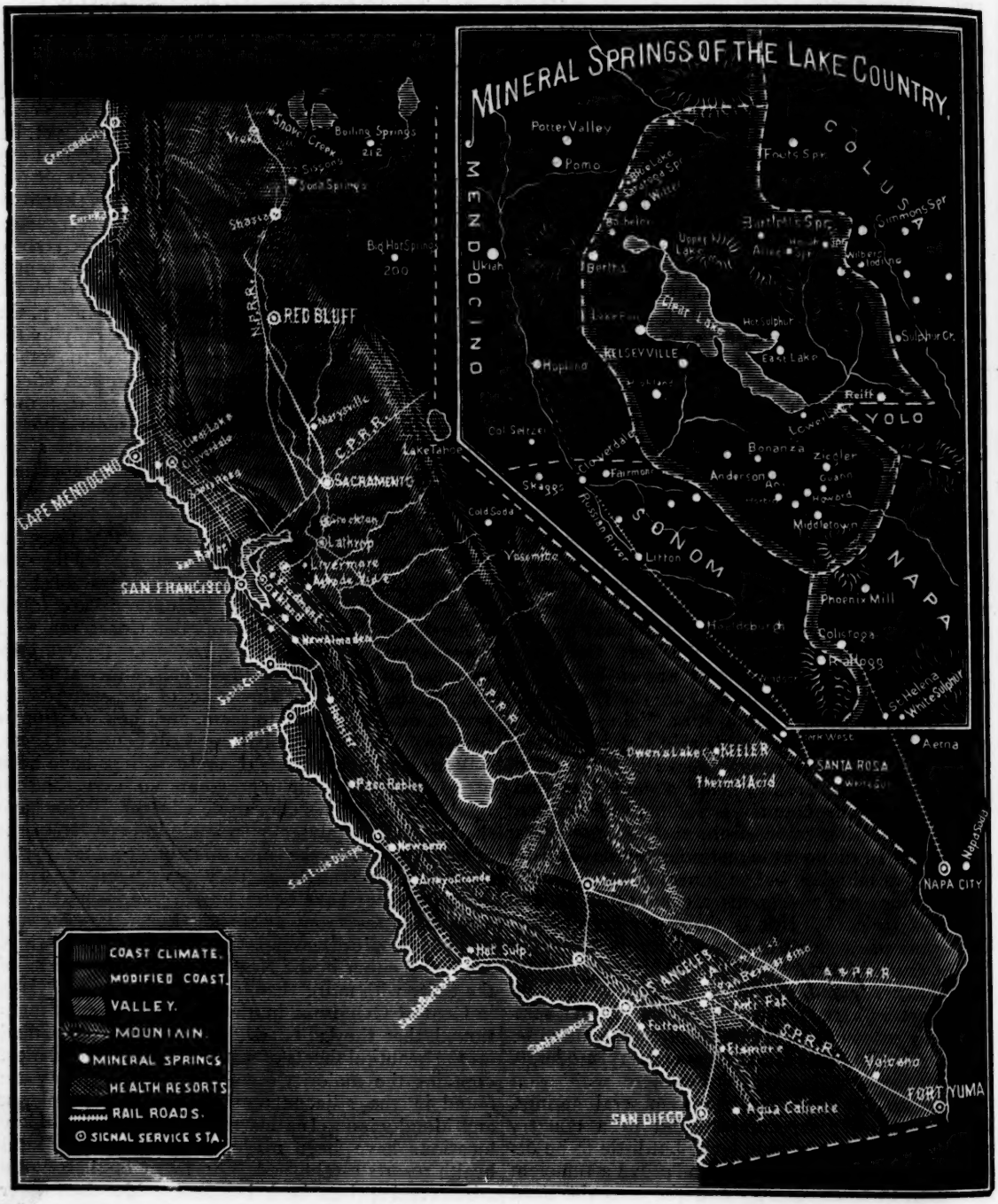
Still further inland, in the very heart of the foot-hills, there is a region which should attract sanitarians by reason of its promise of therapeutic usefulness. It combines magnificent scenery, moderate elevation, and a bracing atmosphere with what promises to be most important mineral springs. These occur in great numbers and in a country which, without them, would leave but little to be desired. Fish and game abound and prove a sufficient attraction to force energy and life into the most lethargic and induce that amount of exercise necessary to vigorous health. Volcanic products are here found in great abundance and mineral deposits are frequent. Water, trickling through these, become impregnated with various salts, and, emerging as springs, undoubtedly possess some healing power. Little scientific attention has been bestowed upon them, and, while a few have been authoritatively analyzed and honest efforts have been made to have them stand on their own merit, many have been given names and analyses, tending rather to prove their resemblance to some celebrated Eastern or European Spa, than to make plain the many and strong claims peculiar to themselves.

While Sulphur, Vichy and Congress Springs may be rightly named, and their claims of resemblance to their more celebrated sponsors may be just; yet, because of their origin, it is no more probable that any two would resemble than that two kaleidoscopic pictures, although formed by the same glasses, should be identical. The more disagreeable the water tastes, the more redolent it is of sulphur or the more stained with iron, so much the more eagerly is it sought after. No matter what salts be contained in the water or what be their degree of concentration, the amount consumed is, as a rule, limited only by the capacity of the stomach or its ability to retain. Thus abused their very best therapeutical effects cannot be obtained. At a few of the more prominent resorts physicians are located who can give intelligent directions with regard to the waters and recommend or forbid their use, but therapeutical precautions are often disregarded.

These springs are scattered over the whole State. Provided they be easily accessible and the surrounding country, climate and scenery be such as to warrant the outlay a health resort is established; otherwise they are ignored. Hundreds are found throughout the mountains of the Coast range in spots wild and inaccessible, but even these are by no means neglected. Wild animals, either attracted by the singularity of the taste of the water or for proved qualities, flock to them, and their location is usually marked by numberless trails centering there.

Various classifications of these springs have been attempted, but their ingredients so vary that no rigidly scientific system can be adopted. Nor have the necessary analyses been made to even classify in accordance with the nomenclature ordinarily employed. But crudely as they have been used and greatly as they have been abused, there is much and unanimous testimony as to their beneficial effects in certain chronic diseases. Comparatively few springs are found either in the Northern or Southern parts of the State with more than a local reputation. It is in Central California, in the foot-hills already mentioned, that they abound. Lake county, so named for the beautiful sheets of water within its boundaries, contains the majority of these; although many are found in the adjacent counties of Napa, Solano, and Mendocino. In this region alone some thirty locations have been made, buildings erected and health resorts established. At many of these there are several springs both hot and cold; the former being used tropically or in the form of bath, the latter internally.

Clear Lake, surrounded by mountains, lies in the heart of this region. It is easily reached from San


MINERAL SPRINGS OF THE LAKE COUNTRY.
MENDOCINO
COLUSA
YOLO
SONOMA
NAPA
Potter Valley
Pomo
Ukiah
Bartlett Spr.
Grimmons Spr.
Upper Lake
Clear Lake
Hot Sulphur
Sulphur Cr.
East Lake
KELSEYVILLE
Hopland
Reiff
Col. Selzer
Bonanza
Ziegler
Anderson
Fairmont
Skaggs
Cloverdale
Cold Soda
Yosemite
Litton
Middletown
Phoenix Mill
Calistoga
Rathgg
St. Helena
White Sulphur
Aetna
SANTA ROSA
Owens Lake
KEELER
Thermal Acid
NAPA CITY
Napa Soda
Boiling Springs
212
Soda Springs
Shasta
Big Hot Springs
200
RED BLUFF
N.P.R.R.
C.P.R.R.
Marysville
Lake Tahoe
SACRAMENTO
Colusa
Woodland
Knights Ldg.
Stockton
Lathrop
Livermore
Alameda
SAN FRANCISCO
Oakland
Berkeley
Redwood
New Almaden
Santa Cruz
Watsonville
Hollister
S.P.R.R.
Paso Robles
Newsom
Arroyo Grande
Mojave
Hot Sulp.
LOS ANGELES
A.T.&S.F.R.R.
Anti-Pat
Fullerton
Elsmere
S.P.R.R.
Yuma
FORT YUMA
SAN DIEGO
Agua Caliente
CAPE MENDOCINO
Eureka
Arcata
Trinidad
Cloverdale
Healdsburg
Russian River
COAST CLIMATE.
MODIFIED COAST.
VALLEY.
MOUNTAIN.
MINERAL SPRINGS
HEALTH RESORTS
RAIL ROADS.
SIGNAL SERVICE STA.

Francisco either by Calistoga or Cloverdale. Daily stages here connect with the various health resorts, the time occupied in reaching the most remote not being over twelve hours from San Francisco.

In the accompanying map I have figured those health resorts only which have an established reputation and where special preparations have been made to accommodate guests. I find it impossible to accurately locate all the mineral springs. There are very many in Southern California, especially in the counties of San Louis Obispo and San Diego which have only recently been improved. Not having visited all these springs, and descriptions with reference to locality being vague, I can only approximate the situation of certain ones.

The climate of the Valley belt I cannot unreservedly praise. During the summer the thermometer ranges high, in certain localities registering 110° or over. This heat is better borne than would be that of a like intensity in the East, because of the extreme dryness of the atmosphere. This, like a sponge, absorbs moisture from the body with such rapidity as to cool the surface. Probably this evaporation is so great as to dry the fluids in the body, and certainly act injuriously upon the mucous membranes of the nose and bronchial tubes. Many cases of malaria, diphtheria and other endemic diseases here rankly flourish; partly due to artificial irrigation, but more especially found in those localities along the Sacramento and San Joaquin rivers which are annually overflowed. During the winter months therapeutic benefit can be obtained even here by reason of the mildness of those localities far to the South or where the Coast range breaks and allows the warmer Coast climate to exert a moderating influence.

Oroville, situated on the Western slope of the Sierras, is now regarded as the heart of the Northern citrus region, and the country adjacent is being fast settled by invalids who here combine a mild climate, with work not unpleasant.

The winter mildness of the Sacramento valley is not altogether due to the warmer coast wind. It lies at the foot and on the western slope of the Sierra Nevada mountains, which effectually protect it from the cold polar trade wind. This is well illustrated by comparing the winter climates of the western and eastern slopes. Truckee, on the eastern slope, is not uncommonly buried in ten to twenty feet of snow while Colfax and Auburn, just across the divide, are surrounded with green fields, and a little further down, fruit orchards and orange groves flourish.

Lieut. Maxfield, Signal Service Officer in charge of the station at San Francisco, has, at my request, compiled the table appended.

The stations named are taken as types, being selected as most nearly representing the various climates. The second column indicates the highest, while the third gives the lowest degree of heat registered by the thermometer during the whole month. The other columns are sufficiently explained by their headings. The stations located at San Francisco and Mendocino typify the climate of the coast belt. Mendocino, projecting far into the ocean, is unduly

JANUARY, 1886.

Stations.	Mean Temp.	Maximum.	Minimum.	Mean Daily Max.	Mean Daily Min.	Mean Daily Range.	Greatest Daily Range.	Least Daily Range.
Cape Mendocino..	48.0	61.1	33.7	52.7	43.5	9.2	23.1	4.4
San Francisco....	50.9	67.5	41.0	56.5	45.8	10.7	19.6	5.8
Red Bluff.....	46.2	64.5	36.0	54.3	39.3	15.0	27.5	5.0
Sacramento.....	45.7	62.2	27.5	52.0	40.4	11.6	21.5	3.5
Los Angeles.....	54.7	75.3	32.0	63.6	47.0	16.6	28.2	5.7
San Diego.....	55.9	73.5	34.8	62.3	49.3	13.0	24.2	4.8
Keeler.....	42.8	67.0	25.6	51.4	34.5	16.8	24.3	8.8
Yuma (Fort).....	55.0	79.6	30.4	64.9	45.8	19.1	30.5	7.0

FEBRUARY, 1886.

Cape Mendocino..	50.3	60.9	34.5	54.5	46.1	8.4	14.5	3.8
San Francisco....	55.8	71.0	41.0	63.8	49.9	13.9	20.5	5.2
Red Bluff.....	54.5	77.0	37.0	64.9	44.4	20.5	33.0	9.5
Sacramento.....	53.5	72.7	38.0	61.4	47.1	14.3	23.0	7.0
Los Angeles.....	59.5	81.0	41.1	71.6	48.5	23.1	32.7	8.9
San Diego.....	58.5	80.3	44.2	68.0	50.2	18.0	29.6	4.8
Keeler.....	50.8	73.0	31.2	62.6	40.7	21.9	28.2	13.7
Yuma	62.7	83.4	43.9	76.2	50.2	26.0	33.3	18.4

MARCH, 1886.

Cape Mendocino..	46.1	55.7	35.8	51.1	41.5	9.6	15.4	6.0
San Francisco....	52.6	73.1	41.0	60.7	46.6	14.1	24.1	6.5
Red Bluff.....	52.8	74.6	35.0	62.0	43.8	18.2	29.4	10.0
Sacramento.....	52.1	72.0	37.7	60.8	44.2	16.6	26.3	8.3
Los Angeles.....	54.3	76.0	37.2	65.6	45.3	20.3	28.8	11.9
San Diego.....	55.0	68 2	40.7	62.2	48.0	14.1	20.6	7.1
Keeler.....	47.5	70.0	26.8	58.3	38.0	20.3	27.7	11.5
Yuma.....	60.5	88.0	38.1	74.1	47.2	26.9	36.6	11.7

APRIL, 1886.

Cape Mendocino..	47.5	63.2	38.3	52.9	42.9	10.0	17.2	4.8
San Francisco....	54.9	78.7	44.2	61.7	49.2	12.4	25.2	5.2
Red Bluff.....	57.7	85.0	36.6	67.5	48.0	19.6	32.6	8.3
Sacramento	55.5	79.7	39.0	65.4	48.1	17.4	26.2	5.3
Los Angeles.....	57.2	80.0	42.3	69.0	48.7	20.3	35.5	10.0
San Diego.....	57.2	70.6	44.7	63.1	51.8	11.3	22.7	5.6
Keeler.....	55.6	80.3	35.2	67.3	45.5	21.9	27.3	10.5
Yuma	67.4	92.6	44.8	82.1	53.8	28.2	38.0	13.4

MAY, 1886.

Cape Mendocino..	* 51.3	† 63.7	† 40.4	† 57.5	† 46.4	† 11.1	† 16.4	† 5.7
San Francisco....	57.8	85.8	47.8	66.4	51.8	14.6	31.6	7.3
Red Bluff.....	66.9	94.7	45.6	78.8	54.7	24.1	33.6	8.8
Sacramento.....	62.0	94.0	44.5	75.4	52.2	23.3	35.5	8.5
Los Angeles.....	62.4	89.0	44.2	78.5	51.1	27.4	38.7	12.5
San Diego.....	60.4	72.3	50.0	67.4	54.5	12.9	17.0	6.4
Keeler.....	68.4	91.4	45.6	80.7	56.4	24.3	30.9	14.3
Yuma	80.1	108.4	54.5	97.0	64.8	32.2	41.4	15.9

* Observations for 28 days.
† Observations for 29 days.

JUNE, 1886.

Cape Mendocino..	54.0	65.9	47.0	59.6	49.9	9.7	14.2	6.5
San Francisco....	57.9	82.8	48.3	67.8	51.1	16.7	27.6	8.4
Red Bluff.....	79.1	102.7	55.8	92.1	64.6	27.5	34.5	20.8
Sacramento.....	69.0	97.7	51.5	85.3	57.0	28.3	35.5	15.0
Los Angeles.....	66.1	91.6	48.2	80.9	56.8	24.1	39.4	9.6
San Diego.....	63.1	74.8	54.3	69.5	58.6	10.9	20.2	6.2
Keeler.....	75.8	98.4	48.4	89.5	63.5	26.0	31.1	17.5
Yuma	84.0	109.5	64.1	102.1	69.5	32.6	39.8	27.5

JULY, 1886.

Cape Mendocino..	55.4	70.7	48.0	61.9	51.4	10.5	20.7	6.3
San Francisco....	59.1	77.8	49.7	67.7	52.9	14.8	22.8	8.4
Red Bluff.....	‡82.9	109.0	55.2	97.0	66.7	30.2	38.7	22.9
Sacramento.....	72.0	105.0	52.2	89.7	58.9	30.7	37.8	24.5
Los Angeles.....	69.7	98.1	50.4	86.9	57.9	29.1	40.4	19.8
San Diego.....	67.1	81.2	57.0	73.4	62.4	11.0	19.7	5.2
Keeler.....	79.9	100.4	58.3	93.4	68.1	25.2	32.1	13.3
Yuma	90.8	112.4	69.3	106.7	77.2	29.5	38.1	14.4

‡ Observations for 30 days.

AUGUST, 1886.

Cape Mendocino..	56.6	71.0	46.5	63.8	51.9	11.9	22.5	7.9
San Francisco....	58.5	84.8	48.4	68.7	52.6	16.2	26.5	8.5
Red Bluff.....	81.5	103.8	57.2	95.9	65.4	30.5	37.1	22.5
Sacramento.....	71.6	102.0	53.2	90.4	58.4	32.0	42.8	23.0
Los Angeles.....	71.8	98.1	53.7	89.1	60.1	29.0	36.7	13.8
San Diego.....	70.5	82.5	61.4	77.5	65.5	12.0	15.7	8.3
Keeler.....	81.5	103.4	65.1	94.0	71.3	22.7	32.5	15.2
Yuma	89.6	111.6	74.7	102.2	79.5	22.7	33.6	11.9

SEPTEMBER, 1886.

STATIONS.	Mean Temp.	Maximum.	Minimum.	Mean Daily Max.	Mean Daily Min.	Mean Daily Range.	Greatest Daily Range.	Least Daily Range.
Cape Mendocino..	57.2	85.4	47.4	64.0	52.8	11.2	25.9	6.3
San Francisco....	60.5	93.9	50.1	71.0	53.8	17.2	35.0	7.9
Red Bluff.....	75.6	106.4	52.6	89.9	61.1	28.8	37.4	17.4
Sacramento.....	67.9	96.0	49.0	85.9	54.9	31.0	40.0	20.0
Los Angeles.....	65.6	91.3	48.3	79.9	55.1	24.8	40.1	13.8
San Diego.....	66.6	77.7	60.0	72.3	62.7	9.6	17.1	6.0
Keeler.....	74.1	94.0	53.4	87.3	62.0	25.3	29.9	17.4
Yuma	84.2	104.5	62.0	98.7	70.7	28.1	35.6	20.8

OCTOBER, 1886.

Cape Mendocino..	53.0	64.8	44.4	58.1	49.8	8.3	13.2	5.5
San Francisco....	57.1	78.9	46.0	66.1	51.1	15.0	28.9	6.3
Red Bluff.....	60.7	92.6	38.5	72.1	49.1	23.0	37.5	13.2
Sacramento,.....	57.1	85.5	38.5	70.9	46.7	24.2	36.0	4.8
Los Angeles.....	59.3	82.2	41.1	71.9	48.3	23.6	39.4	8.2
San Diego.....	59.7	75.0	46.6	66.6	53.3	13.3	26.5	6.5
Keeler.....	58.2	81.4	33.6	68.6	46.8	21.8	27.6	15.3
Yuma	67.4	92.6	46.7	81.3	55.2	26.1	34.9	14.2

NOVEMBER, 1886.

Cape Mendocino..	51.3	68.5	40.2	56.7	47.4	9.3	20.7	4.3
San Francisco....	55.1	75.0	45.0	63.7	49.0	14.7	23.1	5.8
Red Bluff§.....								
Sacramento.....	50.4	74.2	32.2	63.0	38.6	24.4	34.2	6.2
Los Angeles.....	56.6	84.9	34.1	70.4	43.0	27.4	38.9	13.5
San Diego.....	56.0	77.0	40.0	65.8	48.0	17.8	26.4	6.6
Keeler.....	45.1	68.1	24.3	56.3	35.7	20.6	32.7	13.8
Yuma	57.8	80.8	32.9	69.7	46.6	23.1	36.7	12.9

DECEMBER, 1886.

Cape Mendocino..	50.8	63.8	42.3	55.4	47.8	7.6	12.4	4.1
San Francisco....	53.1	66.0	43.3	58.9	48.4	10.5	18.4	4.0
Red Bluff§.....								
Sacramento.....	49.2	65.2	32.0	57.6	42.2	15.5	32.2	5.5
Los Angeles.....	55.7	84.8	37.3	67.3	45.5	21.8	33.6	9.9
San Diego.....	56.0	75.5	40.5	63.4	49.2	14.2	24.5	7.6
Keeler.....	44.7	62.4	30.2	54.7	36.1	18.6	26.5	12.5
Yuma	59.3	79.3	34.3	72.5	47.3	25.1	32.6	18.1

§ Form not received for this month.

Red Bluff, Nov. '85	52.7	71.0	38.5	58.5	46.7	11.8	23.5	4.0
" " Dec. '85	49.3	68.0	33.0	55.3	43.6	11.7	21.0	5.5

exposed to the cold fogs and, for this reason, averages somewhat cooler than does San Francisco. Both north and south of Cape Mendocino the climate closely approximates that of San Francisco. Red Bluff and Sacramento fairly represent the climate of the valley belt. Red Bluff, situated far north, is not so cooled by the sea-breeze as is Sacramento.

A comparison of the temperatures of Los Angeles and San Diego is apparently in favor of the latter city, which is a trifle cooler in summer and warmer in winter. San Diego is directly on the ocean and is more exposed to winds than Los Angeles, for which reason many prefer the inland city.

Unfortunately, there is no official report of the temperature of Shasta and Scott valleys, which occupy the extreme north of the valley belt, or of the eastern slope of the Sierras. These are the only portions of California whose climate resembles that of the Eastern States. There are four well-marked seasons. The thermometer rises to 100° during the hottest days of summer and falls to zero or below during the winter. This is due to the fact that Shasta and Scott valleys are separated from the coast by the Siskiyou Mountains, a range whose lowest pass is 5,000 feet above the level of the sea. This effectually protects them from the modifying influence of the coast wind.

Therapeutics.—The difference between the subdivisions of the coast climate, viz.: that found directly along the coast and that of Southern California and inland valleys, is the difference between a plunge bath in the ocean and a tepid sitz bath which is so near the temperature of the body as to produce a feeling of languor only; in other words, should the patient be so feeble that the cold wind and salt air chill, and should the after effect be such as to leave him depressed and unrevived, a residence on the seacoast is not desirable; on the other hand, should the patient be more robust and of a naturally vigorous constitution, the cold air, at first chilly and raw, soon produces a state of well-being. Vigor and tone are infused through the body, difficult for one who has never experienced it to understand.

But there are certain diseases, no matter what the constitution of the patient be, which are deleteriously affected by the coast climate. Those suffering from rheumatism should especially avoid the coast and seek a residence either in the mountains or at certain mineral springs. Shovel Creek Springs, situated on the Klamath river in the northern part of Shasta valley, has obtained a reputation for its efficacy in the cure of this disease. Mud impregnated with hot mineral waters is used topically, and often succeds in relieving those obstinate forms of chronic rheumatism when ordinary remedies fail. Hot baths are also to be obtained, but are not to be recommended unless competent medical advice has been sought and the circulatory system found perfect. Other springs noted for their efficacy in this disease are found in the lake country. Much benefit has followed the internal use of the waters of the Bartlett and Witter Springs. Fulton Wells and Paso Robles have also obtained a wide reputation. Chronic bronchial and laryngeal affections are unfavorably affected by the raw sea air. For these the foot-hills, where the temperature is even and the climate mild, is a most suitable location.

The Highland Springs of Lake County, both by reason of their climatic surroundings and the specific influence claimed for its waters, has been highly recommended.

Those of a bilious temperament should avoid the coast. For some reason, to me unknown, it acts injuriously upon such cases. Avoiding the diseases just mentioned those otherwise affected may seek the coast with a certainty of benefit, provided that their constitutions be sufficiently robust to react in the bracing atmosphere. Malaria never originates on the coast, and when contracted elsewhere and brought here, if mild, is at once cured; when more deeply rooted it assumes a remittent type and will often recover without aid of medicine. Those cases of malarial poisoning accompanied by serious visceral lesions, which are of such frequent occurrence in the Southern and Southwestern States, and which medicine cannot relieve, should be sent to this climate. Those kidney diseases which water impregnated with lime is supposed to aggravate are relieved by the use of the waters here, which, as a rule, are deficient in this.

Certain waters strongly impregnated with alkaline carbonates, such as those found at Byron, Tolenas and Skaggs Hot Springs, are also very efficient in relieving these cases.

Consumption is supposed to be favorably influenced by the modified coast climate. It is true that the great majority of those coming to Southern California are of this class, but whether they derive any benefit outside of the hopes engendered and the exercise they undergo in their flight from death, I cannot say. Provided that the etiology of this disease be settled, that the bacillus which is beyond question found in the tuberculous deposits be not an effect, but the cause, and that its multiplication results in lung destruction, then I cannot understand how any climate can materially benefit. A germicide and not a climate is essential for a cure. On the other hand, if it be an inherited disease, depending on a depraved constitution which at the least exposure is liable to break down and manifest itself by the formation of tubercles, then what improves and renders the body vigorous must also beneficially affect the lungs.

Consumptives should be warned not to drink the water of or to bathe in the hot mud of the various mineral springs. When the disease is advanced they should be kept at home, no matter what part of the world it be in.

Many come to California in the last stages and only reach it to die among strangers. When the advice of the physician is overruled and they must choose some climate, that region south of Santa Barbara should be selected; both because of its easy accessibility and by reason of its mildness and the unchangeable climate there found. In the early period much can be hoped for from this climate. Numerous health resorts have been established both directly on the coast and in the interior valleys. For those incipient consumptives who are fond of sport and for whom an outdoor life is desirable, certain portions of the mountain belt are to be recommended. Above 3,000 feet the oppressive heat disappears; though still warm, outdoor exercise can be taken without inconvenience. Camp-life can be indulged freely, the dry summers assuring freedom from inclement weather. It combines together with magnificent scenery, a desirable elevation, dryness, a moderate temperature, and a pure atmosphere impregnated with the balsamic emanations of the pine and fir trees. There is an immunity from all endemic diseases except mountain fever—described by Dr. Kober in the last Report of the Secretary of the State Board of Health.

This exposure to a dry and high atmosphere presents a hopeful prospect of recovery. Nature here acts on the lungs in a manner similar to that of the pneumatic cabinet recently so much in vogue. It causes the lungs to expand more freely and in this way assists in their development. What specific curative properties altitude possesses over consumption I do not know. I cannot believe that it is the mere fact of causing lung expansion. Certainly less oxygen is obtained in an equal number of respirations. As recent observations tend to show that germs do not readily develop in higher altitudes, this would be a plausible explanation. Consumptives should be absolutely forbidden to use the mineral springs, as under no circumstances can benefit be derived. Certain cases uncomplicated by bronchial lesion seem to do well on the coast. This is probably due to lack of germs; for along the whole coast, except in the region of large cities, endemic and epidemic diseases are unknown. The wind undoubtedly acts as a germicide.

In a paper necessarily so brief, I cannot more fully enter into a discussion of the therapeutical effect of our climate. I trust that in making this summary of the topography of California, its climate, its peculiar environment and its many natural advantages, I have made the subject so well understood that it will be possible for every thinking physician to draw the legitimate conclusions, and to so intelligently advise those invalids desiring a residence here, that they may select a proper location. They should remember that much depends not only upon the disease itself, but also upon the condition of the patient and the peculiarities of his constitution.

DISCUSSION.

Dr. J. M. Allen, of Liberty, Mo.: The article just read is certainly very suggestive of prospective changes in our ideas of pathology. The tubercle has been a puzzle to our profession for years. It is but recently that the mass of the profession has accepted the idea that it was of inflammatory origin. While it is not necessary for us to change from this position it seems more than probable that we will have to change our ideas as to the cause of this variety of inflammation, which we have ascribed heretofore to atmospheric conditions of heat, cold, moisture, etc., and add a new factor, the bacillus tuberculosis, which recent investigations have shown to be always present. This throws new light on climatology. Practical observation has long since taught us that locality, or the environment surrounding the human family, has much to do in determining the character of diseases they suffer from. The absence of a disease from a certain locality carries with it the fact of the absence of the specific cause of this disease. If this specific cause be a germ, it has a life to be supported by its environment, and can exist only when and where these essentials for its life and propagation exist. Now the facts as stated by the author of this paper, that phthisis pulmonalis rarely occurs in certain districts in California, and when cases in their earlier stages are brought there they rapidly improve. This carries with it the idea that the essential for the support and propagation of the bacillus tuberculosis are absent. This idea is strengthened, I think, by the fact that our system of railroads and other means of communication are so perfect and rapid that the bacillus has undoubtedly been planted there, yet it has not lived and propagated for the want of the element necessary for the support of its life. Further, it is a well established fact that there are localities in the West where fresh beef may be hung out in the open air for weeks (without salt) and no putrefaction occur. This can only be explained by assuming that the bacteria of putrefaction are absent, or rather that the element necessary to support the life of this form of germ is absent. Why may not the same be true in regard to the bacillus tuberculosis? Again, Dr. Robertson in-

forms us that in some of the districts of California malaria has no local existence, and only exists when imported, after which it manifests itself in a very mixed form and finally ceased to exist, or becomes attenuated. We all know that this is one of the most vigorous germs we have to deal with, and always exists wherever the elements for the support of its life exist. In regard to phthisis pulmonalis it is a well established fact that irritation followed by inflammation does not necessarily produce tubercle. But when the new factor of life is added, the bacillus tuberculosis, tubercle is always the result. But not desiring to go too far in this direction, we will say that wherever there exists tubercle, the bacillus is present, then what part does it play in the production of this pathological process? It cannot be that of an irritant only; for we all know that irritation and inflammation alone cannot produce tubercle. In view of the fact that this bacillus is a living germ that derives its support of life from its environment. May it not be that it consumes for the support of its life certain cell-elements, the absence of which causes the cell to undergo the retrograde metamorphosis of tubercular formation? We hope that the author of the paper will bring us annually a report on this interesting and important subject, and that he will avail himself of any opportunity to press his investigations in the fresh and fruitful field of scientific research.

DR. A. N. BELL, of New York, stated that the promotion of phthisis may be found in dirty soil-moisture. The smallest percentage of phthisis is among people subject to ocean atmosphere (by which is not meant a *coast* atmosphere). The dry atmosphere, whether in a high latitude or in a hot school-room will draw moisture wherever it can get it and will draw it from the nares and bronchial tubes. Englishmen go to Madeira, and others go to Nassau and Bermuda. Some think they cannot live unless they go to these places every winter, and is so not because they are in a moist atmosphere but a *clear* one, and one that is unirritating. It should be borne in mind that only about one-fourth of the cases of phthisis are hereditary, and that on most of our seacoast we have dirty soil-moisture—the soil impregnated with both animal and vegetable decomposition.

DR. J. F. HIBBERD, of Richmond, Indiana, said that while he had great pleasure in the paper, it was open to the criticism of not being sufficiently definite to enable a physician to select the particular location in California where he could send a patient with any given form or stage of consumption. We needed more definite information. It was possible that certain surroundings in any climate might determine whether a patient with incipient consumption should succumb to the disease or recuperate and be of sound health. Dr. Lynch, in his address before the Association this morning, told of an experiment recently reported in Baltimore, wherein fifteen rabbits of equal development were utilized. Five of them were injected with bacilli, put into a dark, damp cellar, and all died of tuberculosis. Five were likewise injected with bacilli, sent into the country, where they had good air and food and opportunity for appropriate exercise, and they all recovered. Five were not injected with bacilli but were placed in a dark, damp cellar, and all died, but not with tuberculosis. And to the same point was the testimony of Brown-Séquard with whom he (Dr. Hibberd) had talked some years previously in Paris. He stated that the rabbits and other animals used in vivisections had been placed in unventilated quarters, and nearly all died of tuberculosis; but when they adopted the plan of sending these mutilated animals to the country with plenty of good food, fresh air and exercise, they nearly all got well, though now and then one died of some traumatic accident.

DR. W. L. SCHENK, of Osage City, Kansas: The careful observer notes the effects of various climates and localities upon health. The scientific sanitarian should account for such results. The author of the paper has told us that certain places in California are free from malarial diseases, while in other localities it exists abundantly. My friend says "bacteria malaria," Another might say, simply "malaria"—an entity or nonenity that the most careful and scientific researches in chemistry or microscopy have failed to demonstrate. In all localities where periodic diseases prevail with any considerable intensity, three factors exist, alternating heat and cold associated wlth moisture; the moist heat of the day enervating, the damp cold of night emptying the superficial capillaries until internal engagement involves periodic disease. Moist heat enervates more than dry heat. Moist cold chills more than dry cold. Where there is alternating heat and cold with moisture there will be found malaria.

DR. HENRY B. BAKER, of Lansing, Michigan, asked attention to the fact that three speakers, including the author of the paper, had coincided in mentioning localities and climates as favorable to freedom from malaria and to recovery from phthisis, the prominent character of which was small daily range of temperature; that is, slight difference between the day and night temperature. This is true of California and the ocean climates. On the other hand, in the inland States the malarial region is the region where there is great difference between the day and the night temperature. And going from the North toward the South the malaria increases somewhat in proportion as the difference between the day and the night temperature increases.

DR. WOODS HUTCHINSON, of Des Moines, Iowa: There seems to me no inconsistency between either Dr. Bell's or Dr. Hibberd's statements and the germ theory of the origin of phthisis. The "dirty moist air" of the former is the chosen home and necessary environment of bacteria, while the "ocean air" is above all others essentially free from germs, inasmuch as they are too solid bodies to be carried over long ocean distances. California atmosphere ought to be germless on account of the ocean on the West, and the desert and frozen mountain chain on the East; and this undoubtedly is one of the factors in its value for the treatment of phthisis. The leading factor, however, in the efficacy of climate upon disease germs lies in the fact that it encourages outdoor exercise and improves the physique in every way.

This is the one property in which the Engadine, Cuba, Los Angeles, and Madeira have in common. The most effective germicide is a vigorous healthy organism. Life is the deadliest enemy of disease and decay, and what we are endeavoring to accomplish with our cod-liver oil and hypophosphites, is done much more effectually by mild, invigorating climates. The vitality of the body is raised to where it can destroy any disease germ, whether tubercular or malarial.

GERANIUM MACULATUM.

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty-Eighth Annual Meeting of the American Medical Association, June 7, 1887.

BY JOHN V. SHOEMAKER, M.D.,
OF PHILADELPHIA.

If the craze for therapeutical novelties could be diverted from the jungles of India and the laboratories of the manufacturing chemist, to the fields and forests of the United States, suffering humanity would be the gainer. Many of the most highly-lauded, marvelous synthetical products and wonderful drugs precipitated upon the profession during the past few years are not only useless but positively injurious, while scarcely 2 per cent. of the remainder possess any practical value.

Geranium Maculatum, to which I desire to redirect your attention to-day, is not a new remedy imported over thousands of miles of land and sea at prodigious expense, neither is it the patented compound of forty stills, recommended as a sure cure for all diseases by forty medical theorists who do not know the difference between the pulse in health and disease, but it is one of the most valuable and yet the least known of American indigenous remedies. More than 60 years ago Dr. Barton, in briefly reviewing its medicinal properties, declared it to be certainly entitled to the attention of every American physician. Yet notwithstanding the commendation of Dr. Barton, and other distinguished observers, Geranium Maculatum has been almost entirely discarded. Indeed, so seldom is it prescribed that druggists in many places do not keep it in stock. When I began to investigate its merits five years ago, not one of the eight druggists to whom I sent for it had any on hand; and I was finally compelled to send to a wholesale house for the quantity needed.

Geranium Maculatum contains tannic and gallic acids, gum, starch, sugar, coloring matter and various resin and oleo-resins, which have not yet been studied. Its value depends in large part upon the tannic and gallic acid present, but its resins, oleo-resins and other constituents enhance its usefulness, and render it more potent in many affections than any preparation of tannic or gallic acid alone or combined. The portion of the plant used in medicine is the rhizome, or the root stripped of its bark. The dose of the powdered root ranges from 10 to 40 grains. As it is soluble in water or alcohol it may also be administered in the form of the tincture or the fluid extract. The dose of the former preparation varies from ½ to 2 drachms, and that of the latter from 10♏ to ℥iss. The fluid extract is the most eligible and effective preparation, as it contains all the virtues of its plant. When combined with an equal quantity of simple syrup and diluted with a small amount of water it is not unpalatable, and will not be rejected by the most fastidious patient.

Therapeutic Action.—There are few remedies which possess a wider range of usefulness than geranium maculatum, and which are so devoid of harmful properties. In all forms of hæmorrhage, whether internal or external, it is without a superior. Hæmoptysis can usually be promptly arrested by drachm doses of the fluid extract given hourly until the attack subsides. Relapses may be prevented by continuing the same dose at longer intervals for three or four days. Hæmatemesis may be effectually controlled in the same manner after ergot, matico, sulphuric acid, iron, ice and other styptics have failed. In hæmorrhage from the kidneys and the intestinal canal better results can be obtained from the administration of smaller doses, gtt. xx four times daily, for an extended period. Epistaxis may be speedily checked by plugging the nostrils with cotton dipped in a solution composed of 1 part of the fluid extract of geranium and 3 parts of water; or by syringing the nasal passages with the same solution. Hæmorrhage resulting from the extraction of a tooth is occasionally obstinate in character, persisting for days, defying the cautery and other methods, enfeebling the patient and alarming the family; but it can invariably be promptly arrested by filling the socket with a piece of cotton saturated with the undiluted extract of geranium maculatum, and applying firm pressure for a few minutes Hæmorrhagia can be most effectually abated by the internal administration of geranium combined with vaginal injections of the same remedy. In fewer cases it may be necessary to tampon the vagina with cotton soaked in a diluted solution of geranium or to inject the uterine canal with the same solution. This latter procedure is the most effective method of arresting uterine hæmorrhage, but it must be resorted to with caution.

Geranium is also of value in purpura, scurvy, hæmitidrosis, and the hæmorrhagic diathesis. It is a most serviceable remedy in colliquative and chronic diarrhœa, infantile diarrhœa, and the diarrhœa of typhoid fever. It may be given with marked benefit in the later stages of cholera infantum, cholera morbus, and chronic dysentery. In the latter class of affections, rectal injections of the remedy appear to be most efficacious, as by this means the medicament is conveyed directly to the diseased portion of the mucous membrane. This is also an effective method of eradicating ascarides.

Geranium is of especial value in phthisis, restraining the diarrhœa preventing hæmorrhage, moderating the fever and night sweats, lessening the cough and promoting the appetite.

In chronic bronchitis and bronchorrhœa marked improvement may be obtained from the administration of

℞ Tinct. nucis vomicæ ..... ℥j.
Tinct. sanguinaria..... ℥j.

Ext. geranii fl..... ℥jss.
Syr. simp..... ℥jss.
M.
Sig. Teaspoonful in water, every 4 hours.

Chronic gastric catarrh, and the various stomach disorders due to indulgence in alcoholic liquors, can be most speedily remedied by a restricted diet, reformation of habits, and the administration of ℥ss of geranium 4 times a day.

Cases of anæmia and chlorosis in which iron, arsenic, strychnine, phosphoric acid and quinine have not been of any benefit, frequently improve at once upon drachm doses of geranium before meals. Amenorrhœa and other disorders of menstruation dependent upon poverty of the blood, often disappear spontaneously during a course of geranium.

Aphonia due to nervousness, mild cases of hysteria, and alcohol trembling, are all benefited by full doses of geranium frequently repeated. I believe that it will also be found of service in the treatment of chorea.

Diluted with 3 parts of water it forms an elegant and effective gargle in relaxation of the uvula and fauces, chronic pharyngeal catarrh. Applied in the same strength with a post-nasal syringe or douche it is without a superior in naso-pharyngeal catarrh. When combined with an equal quantity of water it forms an excellent mouth wash in aphthæ, scurvy, mercurial stomatitis, and idiopathic softening of the gums. In leucorrhæa, prostatorrhœa and chronic gonorrhœa, it may be given internally, and also used as an injection in the proportion of 1 part of the fluid extract to 10 parts of water. The injections should not be used more than once every second or third day. Purulent cervicitis, fissures of the cervix, and catarrh of the body of the uterus and relaxation of the vaginal walls can be cured by the application of the fluid extract of geranium, either through the medium of an injection or by the ordinary cotton tampon and application.

The pain and irritation attendant upon fissure of the anus can be removed at once by touching the fissure with the undiluted extract, and a permanent cure effected by continuing the applications 2 or 3 times daily for a few days. Prolapsus ani will usually yield rapidly and not recur if the pure fluid extract be brushed daily over the protruding mucous membrane, and a 25 per cent. solution be injected into the rectum every second day. Ulceration of the rectum and anus may be rapidly arrested by the same means. The repeated application of the fluid extract will relieve the irritation and lessen the size of hæmorrhoidal tumors, and not unfrequently occasion them to shrivel up and disappear. A 10 per cent. solution of geranium is a useful application in chronic conjunctivitis, granular lids, and corneal ulceration. The undiluted extract is without a superior in the treatment of fissured nipples. It relieves the pains at once, and forms a protective covering over the painful cracks, beneath which the healing process continues undisturbed. Unlike lead, and the commonly displayed agents, it is harmless to the infant, and need not be washed off before nursing.

Geranium is an excellent remedy in various forms of disease of the skin characterized by excessive secretion. In hyperidrosis and bromidrosis, no more effective plan of treatment can be suggested than bathing the affected parts 3 or 4 times a day with a 30 per cent. solution of the fluid extract. The flow of perspiration is lessened, the fœtor removed, from a state of despondency to one of comparative happiness. Vesicular and purulent eczema, impetigo and pemphigus are benefited by the following lotion:

℞. Extract belladonnæ fl..... ℥i
Extract geranii fl..... ℥j.
Aquæ..... ℥ij.
M.
Sig. Apply night and morning.

The same application will be found both prophylactic and curative in intertrigo, and in eczema and herpes of the genital regions, in persons having a peculiarly delicate skin. It is also efficacious in preventing the development and hastening repair of bedsores, and promoting the healing of old indolent ulcers. Geranium is the best styptic in the materia medica, but it must not be expected to control the flow of blood from an incised artery. It will check venous or capillary oozing, restrain the bleeding of lacerated wounds, and arrest the hæmorrhage following small incised wounds, or various minor operations, more effectually than Monsel's solution, alum, or any of the agents ordinarily employed. It must, however, be applied in the proper manner. To let a few drops fall on the bleeding point will not be sufficient. A small piece of cotton should be soaked in the pure fluid extract and held firmly against the wounded or bleeding surface for a few minutes. A piece of sticking plaster or an ordinary bandage may then be applied. When this method is adopted stitches need not be inserted unless the wound is deep and the edges gaping. Hæmorrhage does not recur, and the healing process begins at once and continues without interruption.

Sloughing and unhealthy sores rapidly assume a healthy appearance when continually bathed with geranium. Vaginal and intra-uterine injections are rarely necessary after delivery, but when the fœtor of the lochia or other symptoms demand their employment a decoction of geranium or 10 per cent. solution of the fluid extract will be as efficacious as solutions of carbolic acid or mercuric bichloride, and far more safe and agreeable to the patient.

Pruritus ani and vulvæ are due more frequently than is supposed to minute fissures of the skin of those regions, or to a relaxed and œdematous condition of the mucous membrane, and consequently can often be promptly relieved by the application of a strong solution of geranium.

Finally, the fluid extract of geranium, owing to the large percentage of tannic acid which it contains, is a convenient and effective antidote in cases of poisoning by iodine, mercury, silver, copper, antimony, digitalis, conium, gelsemium, tobacco, physostigma, belladonna and aconite.

AN INQUIRY INTO THE MORTALITY AMONG PASSENGERS ON VESSELS ARRIVING IN U. S. PORTS.

Read in Section on State Medicine, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY S. T. ARMSTRONG, M.D., PH.D.,

PASSED ASSISTANT SURGEON U. S. MARINE HOSPITAL SERVICE.

The question of the mortality among passengers on vessels coming to this country, aside from the cursory interest of the quarantine physician at the port of arrival, seems to have attracted but little attention—in recent years—from sanitarians at large; unless a case of infectious disease appeared at an inland city in a recent passenger on a steamship, in which case the matter became of considerable importance. This was illustrated in Chicago last April, when small-pox developed in an Italian who had arrived in the city April 1st, the disease appearing April 6th, he having been one of some six hundred emigrant passengers on the steamship "Alsatia," two of whom were affected with small-pox *en route*.

Thinking that an inquiry into this subject would develop something of interest, I have collected the laws relative to reporting mortality of passengers, and the official records of the Treasury Department concerning this mortality, and present them herewith for your consideration.

The Revised Statutes of the United States require (Section 4266) masters of any vessels arriving in the United States or Territories, from any foreign port whatever, to give the collector of customs a list of all passengers taken on board the vessel at any foreign port, in which list the country, age, sex, and occupation of each passenger, and the part of the vessel occupied by each, shall be designated; also, whether any, and what number, have died on the voyage.

The Statutes also prescribe (Section 4268) that in case a death shall have occurred among passengers, other than cabin passengers, over eight years of age, on board any vessel arriving in the United States or Territories, it shall be reported within 24 hours, and the vessel shall pay the collector of customs ten dollars for each of these deaths.

These laws, with those regulating the number of passengers to the tonnage, the space for passengers, food, etc., cover the legal restrictions of the sanitary affairs of the vessel. The enforcement of the latter laws are subject to the perfunctory (if any) supervision of a customs inspector. In a paper the writer presented to the American Public Health Association (Transactions, 1885, Vol. XI, "Maritime Sanitation"), the desirability of an amendment of the laws was urged, making a medical officer of the United States the inspector in such matters. Who can say that instances are isolated like the French steamship Chandernagor, which arrived at New York on April 13, 1887, with 1256 Italian steerage passengers on board, one of them ill with small-pox; in which complaints as to lack of food, water, and sufficient sleeping space, led to an investigation, which revealed that although the French law allowed her to carry 1300 passengers, our law (allowing one passenger to two tons) limited her to 990 passengers. Though seeming irrelevant, these facts are introduced to call attention to the large population confined, for a variable time, on a vessel; and the favorable conditions for poor food or water, or over-crowding, etc., to propagate contagious disease.

In the "Annual Reports of the U. S. Marine Hospital Service," from 1883 to date, a table has been included giving the date of death, name of vessel, port of departure, sex of deceased, and cause of death, if reported, of steerage passengers. From these tables the figures contained in Table I have been compiled.

TABLE I.—EMIGRANT DEATHS.

Year.	Males.	Females.	Total.	Cause of Death, Unknown, and per cent. Total.	
1882	109	45	154	65.	42.2 %
1883	75	37	112	10.	8.9 %
1884	62	43	105	7.	6.6 %
1885	50	27	77	7.	9 %
1886	44	24	68	14.	20.7 %

From Table I it may be seen, 1st, that the mortality among males is almost always 50 per cent. higher than in females; and, 2d, that the mortality from unknown or unreported causes is from 6 to 42 per cent. of the total number of deaths. The first may be explained by the excess of male immigrants; the second, possibly in part to carelessness of ship's officers; but these figures are of some importance as possibly embracing deaths from cholera or yellow fever, as in several instances the vessels came from localities known to be infected. Excepting one woman, from Bremen, who died of cholera September 23, 1882, no deaths of emigrants from cholera, yellow fever or small-pox are reported during these five years.

The small number of deaths — 516 — occurring among so large a number of emigrants, is probably due to the fact that the majority are in the prime of life. This supposition is supported by the number dying in the different decennial periods of life, as shown in Table II.

TABLE II.—EMIGRANT DEATHS, DECENNIAL PERIODS.

Age.	Unknown.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.
Total Deaths.....	5	36	43	111	107	72	68	43	29	2

These deaths are so generally distributed in various diseases that statistical tables of the cause of death would be of no advantage.

Through the kindness of the Commissioner of Customs and the chief of the Bureau of Statistics, I have secured the figures, in Table III, of the number of cabin and steerage passengers brought to this country during the past five years, and the total number of deaths *en voyage*. The figures for 1886 do not include emigrants from Canada or Mexico; and the cessation of Chinese immigration is to be remembered, averaging about 20,000 persons per annum. It would have been an interesting accompaniment to have had the aggregate number of days these passengers were on the vessels.

TABLE III.

Year.	Cabin Passengers.	Other than Cabin Passengers.	Total.	Total Deaths.	Emigrant Deaths.	Per ct. of Emigrants to Total Deaths.
1882	121,571	747,573	869,144	578=.6%	149	26
1883	118,137	594,378	712,515	465=.6%	115	25
1884	124,540	524,931	649,471	392=.6%	108	28
1885	106,362	428,647	535,009	209=.4%	72	34
1886	99,690	334,613	444,303	175=.4%	70	40

If we roughly estimate each passenger to have been on the vessel twelve days—rather below than above the average—we can approximate the annual mortality per thousand. In Table III, in the column headed total deaths, the mortality per thousand passengers is given, six- to four-tenths of one per cent.; this would give an approximate annual mortality per thousand of 18 to 12 per cent., if the passengers remained on the vessel for a year instead of one-thirtieth of that time. We therefore see that though, at first glance, the mortality per thousand seems small, for the time the passengers are on the vessel, it is within four to ten per cent. of the average mortality (22.5 per cent. per thousand) of our American cities.

One reason that the mortality should be low is, that only in exceptional cases would any passenger —either cabin or steerage—start on the voyage if ill. Also the majority of immigrants, who constitute the greater proportion of the passengers, are in the prime of life, so the mortality is less influenced by the heaviest contributors to its increase in cities, those under 5 years of age and over 55.

The most important fact revealed by Table III is the disproportion of the deaths of "other than cabin passengers, over eight years of age" (or emigrants), to the total deaths, varying from 25 to 40 per cent. thereof. Either the mortality among cabin passengers is extremely large, or there is a heavy mortality among emigrant children under 8 years of age, who are not included in the list of emigrant deaths as returned to the customs officials.

When the causes of death are known an examination demonstrates nothing satisfactory, for it is not possible to ascertain, with the data now at hand, the influence of the vessel as a genetic or exciting factor in disease. Such knowledge can only be obtained by the continued investigation of steamship surgeons.

As from 75 to 60 per cent. of these deaths are from unknown or unreported causes, it would seem desirable that an amendment should be made to the law requiring a report of the death of passengers, to the effect that the cause of death shall in all cases be specified, if known.

Aside from the statistical value of such information, its utility would consist in permanently recording the mortality on each vessel; and if this was due to local causes, prompting an investigation and relegating the cause to "innocuous desuetude."

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS.—In an article on this subject PROFESSOR R. VOLKMANN gives a masterly review of surgical tuberculosis, beginning with,

I. *Tuberculosis of the Skin and Connective Tissue.*

1. Lupus is a genuine tuberculosis of the skin, though it is to be considered a special form of tuberculosis, which attacks by preference persons who are slightly or not at all hereditarily infected. Clinically it is characterized by its great tendency to local relapse, in contradistinction to other tuberculous affections of the skin. Between the latter and lupus there are intermediate forms, and the prognosis of these as compared with lupus is more favorable as to local permanent cure, but worse as to later appearance of tuberculous processes in other localities, tissues and organs.

2. *Tuberculous Ulcerations of the Skin*, to be distinguished from lupus, answer mostly to scrofulous ulcerations of older authors. They are most frequently found in children and young persons, but are not very common if we except those cases in which they develop secondarily from tuberculous gland abscesses and tuberculous joint- and bone-fistulas. They are almost without exception permanently cured by surgical interference, without local relapse.

3. *Primary Tuberculosis* and its *primary* tuberculous abscesses, of the deeper, especially *intermuscular, parossal* and *para-articular connective-tissue* layers, are very rare, and must be diagnosticated with the greatest reservation. In the great majority of cases these abscesses are connected with specific bone, joint or gland affections, these forming the primary disease. The present treatment of these abscesses by free incision and scraping out generally shows this relation plainly. When it cannot be demonstrated on the operating table, it must not be forgotten that, particularly in bone, the tuberculous foci from which those apparently primary cellular tissue tuberculoses and para-articular abscesses arise, are often exceedingly small, and may be easily overlooked; and, further, that the abscesses not infrequently appear so late that meanwhile the original bone affection is already healed.

This holds particularly good for the congestion abscesses of spondylitis (tuberculous caries of the vertebral column). In favorable cases these abscesses may heal by a kind of primary union and without relapse after free incision, washing out with antiseptics, drainage and compression for a few days. Out of 57 freely opened congestion-abscesses in spondylitis with gibbus formation during the last few years, 23 healed by first intention, the drains being removed after a few days. This shows that the abscess was not longer supplied with pus and products of disintegration of tuberculous tissue from the bone.

4. As a *primary affection* tuberculosis of the connective tissue is found chiefly in the panniculous adiposus of small children. There develop at once or in rapid succession, a number of small flat knots under the skin (gommes tuberculeuses), which soon

melt and become soft, in a short time generally invading the skin over the area of the affection, so that the skin becomes bluish red, fluctuation becomes more distinct, and finally the abscess breaks. For a number of years I have in my lectures called this the *furunculous form of tuberculosis of the skin and connective tissue.* These abscesses heal rapidly without relapse when incised early and emptied of pus, fungous granulations adhering to the wall, and large plugs of caseated and necrotic connective tissue. Sometimes, however, the process in some of the knots goes deeper instead of invading the skin, and large tuberculous abscesses form under the true skin. In such a case we have to deal with a form of tuberculous cellular-tissue abscess, that is neither related to diseased bones, joints and tendon-sheaths, nor to affections of the lymphatic glands.

5. *Tuberculous abscesses*, if they have existed for some time, whether they be primary tuberculous affections of the connective tissue, or connected with joint or bone disease, are always lined with a characteristic violet-gray, or yellow-gray, opaque membrane. This membrane, which is sometimes several millimetres thick, is only sparingly supplied with blood-vessels, especially in the inner layers, which are constantly bathed by tuberculous pus, and contain an enormous number of miliary tubercles, by which it sometimes has the appearance of only consisting of these. This abscess-membrane is very easily loosened and scraped off from the surrounding tissue (basement substance), often in pieces a square inch in size. The tissues forming the basement substance are perfectly healthy, being the seat of a slight reactive induration only. Very rarely are the adjoining tissues invaded by diffuse tuberculous eruptions and cheesy infiltrations. Only twice in more than 1000 cases of such abscesses freely opened and examined during life have I found a diffuse invasion of tuberculosis into the muscular system, which formed the wall of these abscesses. When cheesy matter and diffuse cheesy degeneration of the muscular substance itself is encountered, the case is generally one of syphilis, and cheesy degenerated gummata. Here the diseased tissues offer the greatest resistance to the sharp spoon, and cannot be simply torn away, or, even by considerable force, be completely scraped out. The characteristic abscess membrane is wanting. Both the signs mentioned here serve also in the diagnosis of actinomycotic foci, invading the muscles and sometimes resembling tuberculous abscesses.

The characteristic abscess-membrane is only found in tuberculous abscesses, and is therefore to be considered an absolutely reliable diagnostic sign.

6. The field of the non-tuberculous chronic abscesses and so-called cold abscesses, as they appear during or after infectious diseases, has yet to be defined by new investigations. At any rate it is much narrower than that of the tuberculous abscesses.—*Langenbeck's Archiv*, Bd. xxxiii, Hft. 1.

THE OPERATION FOR BENIGN PAPILLOMA OF THE BLADDER.—KOCH reports 3 cases operated on by him.

Case. 1—Man, æt. 40, 12 years ago first had urinary trouble, which returned again 3 years ago. In 1876 a small piece of papilloma was removed with the catheter. From 1879 to 1884 he appeared well. After August, 1884, had pain on micturition, and passed a piece of tissue through the urethra. When the patient last came for treatment he was very anæmic. Examination of the external genitals and *per* rectum revealed nothing special. There was severe strangury. Urine acid, with much sediment. Operation October 29, 1884, by median incision. The end of the finger immediately came in contact with a tumor situated high up on the right wall of the bladder. Supra-pubic cystotomy was therefore performed, without filling the bladder, without a colporynteur, and without wounding any adjacent structures. The tumor was pediculated and as large as a hen's egg. It was removed in two pieces by means of stone forceps, and the pedicle cut off with scissors. Hæmorrhage was tolerably severe, but was controlled by irrigation. A large drainage tube was passed through the perineal and abdominal incisions. The patient made a good recovery, and 2 years afterwards there was no recurrence. The tumor was a soft villous papilloma.

Case 2.—Female, æt. 34, had complained for 3 years of burning pain on micturition; bloody urine for 15 months. Since a few months back several small tumors had been passed *per urethram.* On manual palpation of the vagina and abdomen a soft tumor could be felt in the region of the bladder, especially on the right side. The urethra was dilated, and by Simon's mirror a tumor was seen as large as a child's fist, and attached to the right wall of the bladder by a pedicle as thick as the thumb. This was cut through by means of the index finger and sharp spoon, and the tumor removed with forceps and syringing. Eight days afterwards several small excrescences were removed in the same way. Two years afterwards there was no relapse. The tumor was a soft papilloma.

Case 3.—Male, æt. 21, had had frequent strangury for 3 years, with sudden interruption of the stream, and bloody urine. After Easter, 1885, spontaneous micturition was impossible. Strong pressure removed small pieces of tissue from the bladder, and the microscope showed them to be papillomatous. High fever came on, with pain on pressure in the left side. The high operation was performed in June, 1885, and revealed a tumor as large as a man's fist in the bladder, attached by a pedicle to the posterior wall. It was removed in small pieces, and the pedicle tied with catgut. The bladder was sutured with catgut, and a permanent catheter introduced. Dressing changed in 2 days, when urine leaked from the wound. Fever continued down. Towards the end of June an abscess formed on the left side of the rectum, which was opened externally, and fever went down. At the end of July the patient was entirely well, and has remained so.

With *cases 1* and *3* the number of reported operations for benign papilloma of the bladder in men now amounts to 41. Of these 19 occurred between the ages of 50 and 70, 16 between 30 and 50. The

youngest patient was 21 years old. In 12 cases the tumor was seated on the fundus and posterior wall of the bladder, 10 times on the trigonum and mouths of the ureters, 5 times lateral, and 8 times on the upper wall. In consistence they varied from soft villous to tough fibrous masses. In all cases the symptoms were about the same. The earliest was bleeding, coming on during urination, and not dependent on rest or movement. In several cases small pieces of tissue were passed with the urine. A further constant symptom was pain and strangury, in many cases with sudden interruption of the stream. The diagnosis was made by catheterization, endoscopy of the bladder, bimanual palpation, which generally revealed small tumors, and most certainly by median section and palpation. The cases show that suprapubic cystotomy is to be regarded as the normal procedure for treatment, as it alone guarantees a radical operation; that in doubtful cases perineal section is to be made, but generally only for explorative purposes.—*Centralbl. für Chirurgie*, No. 20, 1887.

DETECTION AND REMOVAL OF EMBEDDED NEEDLES.—MR. H. LITTLEWOOD, of Leeds, has adopted the following plan with success: 1. The part supposed to contain the needle is thoroughly rubbed over with an electro-magnet, so as to magnetize the metal if present. 2. A delicately balanced magnetic needle is held over the part. If the needle is present, its position can be ascertained by the attraction or repulsion of the poles of the magnetic needle. 3. Having ascertained the presence of a needle (e.g., in the hand), the part is rendered bloodless, and a grain or more of cocaine injected hypodermically. 4. An incision is made over the ascertained position of the needle. 5. The electro-magnet is then inserted into the wound, and with it the needle is felt for. Sometimes it will be found and removed quite easily, at others great difficulty will be experienced, taking as long as one-half or three-quarters of an hour. This may be due to the fact that its position has not been accurately ascertained; it may be lying across the incision, or it may be so firmly embedded in the tissues that the electro-magnet is not able to withdraw it. If this occurs the incision must be enlarged, and the edges held apart with some non-magnetic retractors; using the electro-magnet as a guide, the needle may be seen and removed with forceps. If the needle is firmly fixed, the following plan has been adopted: by placing the positive pole of a galvanic battery on the surface of the body, and the negative pole in direct contact with the needle, this becomes loosened by electrolysis and can then be easily removed by the electro-magnet. This latter method has been found useful in two cases for the removal of sewing machine needles that had transfixed the end of the finger, and were so firmly fixed as not to be removable by forceps. The electrolytic action loosened the needles so that they could be removed quite easily.

I have now removed six needles from the hand and a piece of steel embedded in the foot. In none of the cases could I feel the piece of metal or be sure of its presence without the aid of the method above described. As it requires some expensive apparatus, and sometimes takes a long time, I am afraid this method will not become general; but it is well worth the time and trouble spent if in the end one is successful; as patients really suffer a good deal of pain and anxiety if these foreign bodies are allowed to remain embedded in the tissues.—*Lancet*, Aug. 27, 1887.

NEW METHOD OF VENTILATION.—A plan for ventilating a room, which is, we think, sound in principle, has been invented by Messrs. Young & Moss. The ordinary fireplace is used to create a draught. The outlet from the room is close to the ceiling; from this point a tube descends, making a bend at the floor level, and reaching the exit at the commencement of the chimney. Between the floor bend and the exit is a cylindrical air chamber, which is said to efficiently prevent any back current into the room. The apparatus can be fitted to any ordinary fireplace, and in the drawing furnished is shown in connection with the well-known "country parson's" grate. The ventilator is concealed by an ornamental panel, and, if uniformity be desired, a panel on the opposite side may be furnished and fitted for a coal-scuttle. The plan adopted by Messrs. Young & Moss seems to us feasible and practicable. When, however, a "ventilator" is ordered, it must always be borne in mind that an "outlet" is only half that is necessary. If inventors wish their apparatus to succeed, they must insist on properly placing inlets also. If this be not done, in proportion as the outlet is efficient so will the cold air come whistling under doors and through cracks and keyholes, and the use of one or other device for the "exclusion of draught" will be the inevitable result.—*Lancet*, October 1, 1887.

QUEBRACHO AS A TOPICAL APPLICATION.—BOURDEAUX calls attention to this use of quebracho. He uses the alcoholic extract diluted with water. He finds it an energetic astringent and a promoter of cicatrization. In burns in the stage of granulation it is preferable to iodoform. In crushed and lacerated wounds healing takes place without the production of pus or symptoms of inflammation under the influence of a few applications of the quebracho solution. When applied to a wound it dries quickly, leaving a deposit or covering under which healing goes forward rapidly. It may be taken internally advantageously in dysentery (20–30 drops). In endometritis and ulceration of neck of womb it is valuable, one teaspoonful being dissolved in large cupful of water and used as an injection. It is peculiarly useful, taken internally, in asthenia.—*Centralblatt für Chirurgie*, No. 41, 1887.

OIL OF SASSAFRAS AND IODOFORM.—According to MR. C. E. DODSLEY the addition of gtt. iv of oil of sassafras to ʒi of iodoform completely covers the disagreeable odor of the latter, and the odor of the oil itself is not noticeable.—*New York Med. Journal*, Oct. 8, 1887.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.

PER ANNUM, IN ADVANCE.....$5.00
SINGLE COPIES.....10 CENTS.

Subscriptions may begin at any time. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, OCTOBER 29, 1887.

KREATIN AND KREATININ:—ARE THEY WASTE OR NUTRITIOUS PRODUCTS IN THE ORGANISM?

This question is of interest not alone from a purely physiological point of view, but also from the clinical standpoint, since the substances are part of the extractives of beef extracts, and may play an active part in rendering the latter nutritious and stimulating. Kreatin is known to increase in muscle when it is made to contract. Kreatinin is found in the urine, where its amount increases when injected into the blood. It is also found in larger quantities in the renal secretions when a person lives upon meat than when upon a purely vegetable diet. Its quantity is also increased in acute diseases and in chronic anæmic disorders, and is diminished in convalescence.

Chemists generally assert that both of these substances are formed in the organism by oxidation of proteids, and that they are substances formed as intermediate products of the final conversion of proteids into urea, carbon dioxide, water, etc. They have therefore been regarded as waste products. Dr. T. J. Mays[1] has asked, however, the question with which we began these remarks. He was led to it from a study which he prosecuted to determine the nutritive and stimulating value of beef extracts. This he found considerable even when the amount of albumen present was so small that it could hardly be the active agent in them. He sought, therefore, in the extractives for some nutritive substances. The extractives of beef extract are chiefly kreatin, kreatinin, sarkin, xanthin, carnin and inosite. To test their nutritive and stimulating power he made use of the frog's heart in the following way: When a .6 per cent. saline solution is passed through the heart it gradually ceases to beat. Water, acids and alkaloids do not revive it, but blood, milk and beef extract will cause it to renew its wonted rhythmical movements. So also, and to fully the same extent, kreatin and kreatinin are found to stimulate and nourish the heart muscle. Dr. Mays found that "after working for many hours with a frog's heart, and after it became so thoroughly exhausted as to refuse to respond any longer to the stimulant action of blood, the transfusion of kreatin or of kreatinin in the proportion of one part to one or two thousand parts of saline solution would at once spur it on to renewed contractions, which were continued for some time longer."

Sarkin and xanthin have to a very limited degree the same action upon the heart muscle. The other extractives of beef extract are without activity.

Although asparagin, thein and caffein are very similar to kreatin and kreatinin in chemical composition, the former substances do not possess the power of exciting and recuperating the wearied heart muscle.

These facts lead us to look upon kreatin and kreatinin as substances of nutritive value. And the character and degree of stimulation of the heart muscle by them so exactly corresponds to that of beef extract solution that we must look to them as the active stimulating principles of this solution.

The author does not reason further in regard to the nature of these substances, but their behavior suggests to us the query, whether kreatin and kreatinin are not the products of cellular action on the albuminous substances in the blood and interstitial spaces; products prepared by the tissues for their own use, and representing a part of the intimate constructive changes that food undergoes after solution in the alimentary tract and introduction into the blood.

[1] "The Physiological Action of Kreatin, Kreatinin and their Allies." By Th. J. Mays. The Practitioner, October, 1887.

THE DEATH OF VON LANGENBECK.

In the death of PROFESSOR BERNHARD VON LANGENBECK the surgical world has sustained a most severe loss, and thousands of his pupils, in every land, will deplore the stroke that has removed one of the greatest surgeons of all time. And his pupils, those whom he has taught, are not only those who have learned from his lips, but every surgeon may justly claim to have been taught by him. In the words of a well-known German surgeon "Langenbeck was one of the first surgeons of the new era,

genial and inventive, a masterly operator, a fine therapeutist, beyond comparison in personal experience, of inexhaustible perseverance." He devised many new operations and improved many old methods of operating, and his contributions to conservative surgery by the use of resections, subcutaneous osteotomies, osteoplastic operations and tenotomies are alone sufficient to have given him a lasting reputation.

Von Langenbeck was born at Horneburg, in Hanover, in 1810, and was graduated from the University of Göttingen in 1835. Shortly after this he established himself in Göttingen as Privat-Docent in physiology, and began to practice surgery. Soon afterwards he was made Professor Extraordinarius; and in 1842 he went to the University of Kiel as Professor of Surgery and Director of the Friedrichs Hospital. In 1848 he became connected with the army, and directed the surgical department in the hospitals during the war of the Duchies against Denmark. In this year he was called to Berlin to succeed Dieffenbach, becoming, at the age of 38, Professor and Director of the Berlin Royal Surgical Clinical Department, the greatest surgical clinic in Germany. His reputation was in a great measure made by the ability displayed by him in the three wars against Denmark in 1864, Austria in 1866, and France in 1870. He was ennobled by the King of Prussia after the Danish war in 1864.

Sir William McCormac, who became acquainted with him during the Franco-Prussian war, says: He was not less beloved as a man than renowned as a surgeon and teacher. The surgical professors in most of the great Universities (W. Busch, Wilms, von Bergmann, Nussbaum, Billroth, Volkmann, Socin, König, Schoenborn, Trendelenburg and others) have been among his favorite pupils and assistants, so that the influence of his teaching has spread far and wide. Personally he was beloved in a rare degree as a man of spotless honor, sympathetic and affectionate, and with the warmest domestic affections. . . . Mainly through his example did conservative surgery obtain a sure footing in military practice. His results in regard to excision of joints, especially the ankle and wrist, are most remarkable, and his keen observation told him the frequent possibility of saving the limb when the knee had been perforated by gunshot. None could be more dexterous as an operator. He was bold beyond most men, and his knife was always guided and controlled by profound anatomical knowledge. He possessed a capacity for work which was simply astonishing. His habit was to rise at 4 every morning, drink a cup of coffee which he made himself, and begin his literary work.

In 1860 he started the *Archiv. für klinische Chirurgie*, commonly known as Langenbeck's *Archiv*, and edited it, with the assistance of Billroth and Gurlt, up to the time of his death. In this may be found most of his numerous contributions to surgical literature. It was through his efforts that the Association of German Surgeons was formed. He was chosen its first President, the office being an annual one, but at the end of the year he was re-elected, and was finally made perpetual President. Five years ago his failing health compelled him to remove from Berlin to Wiesbaden, and the remainder of his life was spent in the beautiful home which he built for himself on the slope of the Nersberg. Not long since he submitted to operations for cataract, which seemed to be successful. He died of cerebral apoplexy on September 29, and on October 5 was buried by the side of his wife in the cemetery at Berlin.

"A great and rare man is gone," says Guttmann, "gone the eminent teacher, the great master, the Nestor of German surgery, the ornament of our State and University, where thousands have sat at his feet and received instruction from his lips."

INDIRECT AND IMPROPER ADVERTISING.

We frequently receive from some of those who have advertisements in the advertising pages of THE JOURNAL, printed slips ingeniously calling attention to the value or peculiar quality of one or more of the articles they advertise, couched in such phraseology as to appear to have been written by the editor of THE JOURNAL, accompanied by a request to give such slips a place in the columns of THE JOURNAL for reading matter. We have uniformly refused to use such slips, and for the following reasons: 1. In making a contract with an advertising patron for a given space in the advertising columns and for a certain sum, there is no condition either expressed or implied that he shall have any additional space in any other columns not devoted to advertisements. 2. If we should accept such slips and place them in our reading columns as though they were expressions of our own opinion concerning this or that article, when they were actually only the interested expressions of the manufacturers or advertisers themselves, we would be practicing a direct fraud upon our readers. This reason alone, is abundantly sufficient to deter us from yielding to any such use of our columns. Not a few enthusiastic manufacturers of medicines, formulas, foods, etc., appear to think we should ac-

tually test by clinical use every new thing, and every new combination of old things, they choose to send us, and express either by certificate or through the columns of THE JOURNAL, our most gratifying approval. It seems never to have entered into the thoughts of such parties, that such a task would require us to devote *all our time* to that work, and make *all* our patients subjects for *experimental* dosing, leaving us neither time to edit THE JOURNAL or even to tabulate the results of our heterogenous experiments on suffering humanity.

It is proper for physicians to use cautiously and judiciously such new remedies as may reasonably be presumed to possess valuable properties in the treatment of disease. But to obtain reliable results, such use must be extended through a large number of cases, the correct diagnosis of which has been assured; and only an actual clinical record of such cases becomes appropriate and desirable material for the reading columns of medical journals.

THE DEATH OF FREDERICK HYDE, M.D., Professor of Surgery and Dean of the College of Medicine of Syracuse University, N. Y., was announced Oct. 17, 1887, at the age of 80 years. The deceased had long been known and recognized as one of the most honorable and intelligent members of the profession in the State of New York. The following report adopted at a meeting of the Faculty of the Syracuse University, on the evening of Oct. 17, correctly voice the sentiments of all who have the pleasure of an acquaintance with Professor Hyde:

In the full possession of his mental faculties, with eye undimmed and natural strength unabated, our beloved dean, Dr. Frederick Hyde, at the advanced age of four score years, has been called from his life of incessant unselfish labor to his rest and eternal reward.

As colleagues we unite in mourning his loss with that large community where he was revered for his unswerving integrity and his active devotion to the best interests of society; with the church of which he was a consistent and influential member; and with his stricken family who, while they miss with anguish, remember with gratitude and pride, his affection, his kindness, his sterling character and that "purest treasure mortal times afford, a spotless reputation."

Extensively known by his valuable contributions to surgical literature, and by his early and continuous advocacy of a higher standard of medical education, Professor Hyde was a prominent founder of our University College of Medicine, and he has worthily filled the office of dean since the beginning, fifteen years ago.

His associates and the students in the medical school which he loved and to which he devoted so much valuable time, will miss his gentlemanly presence, his genial manner, his wise and encouraging counsel, and his learned teaching.

We all bear ready and unreserved testimony that his influence has always been salutary, at once a stimulant and a benediction.

As a slight token of our respect and affection, we will follow his mortal remains to their resting place to-morrow.

H. D. DIDAMA,
WM. MANLIUS SMITH,
W. T. PLANT.

GLEDITSCHINE OR STENOCARPINE.—Investigations of specimens of this new remedy, obtained from Messrs. Lehn and Fink, of New York, at the laboratory of Messrs. Parke, Davis & Co., appear to prove the said remedy to contain 6 per cent. of cocaine and probably some sulphate of atropia, while the leaves of the Gleditschin triacanthus, from which the stenocarpine is supposed to have been derived, contains but a very small quantity of an alkaloid, and that without active anæsthetic properties. Is the new remedy an attempted imposition upon the medical profession?

SANITARY CONVENTION AT ALBION, MICHIGAN.—A Sanitary Convention, under the auspices of the Michigan State Board of Health, will be held at Albion, on Tuesday and Wednesday, Dec. 6 and 7, for the discussion of important topics relating to the sanitary interests of the people. Citizens generally are invited to attend. Prof. Delos Fall is Chairman of the Local Committee, and Dr. H. D. Thomason, of Albion, Secretary.

A NAVAL MEDICAL EXAMINING BOARD is now in session at the Naval Hospital, Philadelphia, Penn., for the purpose of examining candidates for admission to the Medical Corps of the Navy. Circulars of information can be obtained on application to the President of the Board. There are twelve vacancies in the list of Assistant Surgeons.

DISTRICT MEDICAL SOCIETY OF CENTRAL ILLINOIS.—This Society will hold its Semi-Annual Meeting at Vandalia, Ill., on Tuesday, Nov. 1, 1887. An interesting programme of work has been provided.

DR. JAMES KNIGHT, Surgeon-in-Chief of the Hospital for the Ruptured and Crippled, of New York, died on October 24 after a brief illness. He was the founder of the Hospital. He was born in Maryland in 1810, and was graduated from the Washington Medical College of Baltimore in 1832.

SOCIETY PROCEEDINGS.

ST. LOUIS MEDICAL SOCIETY.

Stated Meeting, September 24, 1887.

THE PRESIDENT, S. POLLAK, M.D., IN THE CHAIR.

DR. WALTER COLES read a paper on

POSTHUMOUS DELIVERY.

In considering the subject of post-mortem delivery, several questions of practical importance naturally present themselves, which we will endeavor briefly to consider.

1. As to the power of the child to survive somatic death of the mother, and the duties and responsibilities of the medical attendant in cases of sudden death of the mother at or near full term.

2. As to the capability of the uterus to contract and expel its contents after death.

3. The effect of gaseous distension, the result of decomposition, as an expulsive force.

The second and third of these inquiries are chiefly interesting in a medico-legal point of view, but the first is an eminently practical one, of grave importance, which may suddenly confront any one of us, at any moment, and from its very nature, will require prompt and decisive action. Cases are not rare where from heart clot, or other causes, women have died in labor, or at an advanced stage of pregnancy. In such an emergency, actual death being assured, the question of saving the child naturally arises, and the physician should be possessed of such knowledge as will direct him when and how to act under these trying circumstances.

All obstetrical writers agree that the fœtus may survive the death of the mother for a certain length of time, and it is also a well known fact that an immature child will retain its vitality longer than one at full term. Numerous instances are recorded in which living children have been extracted, both by turning and the Cæsarean section, after the death of the mother. Blundell mentions the case of a woman who was run over by a car, which crushed the liver and produced instant death. The dead body was taken into the hospital near by, when, seeing that she was in an advanced stage of pregnancy, the abdomen was opened and a child delivered, which, though apparently dead, he succeeded in resuscitating. The same author relates the still more remarkable case of a pregnant heifer, whose uterus was opened three-quarters of an hour after death and a living calf extracted. I well remember hearing my father say that he had reared a fawn which he had cut from the uterus of a dead doe. It may be remarked here that the lower animals are said to perish sooner in utero than the human subject.

Authors differ widely as to the length of time at which asphyxia may be overcome and the child restored. Most of us have doubtless seen resuscitation take place after the lapse of many minutes, and hope should never be abandoned as long as there is the slightest heart-beat. Most cases prove hopeless after fifteen minutes, but the numerous authenticated exceptions, where respiration has been established after much longer periods have elapsed, should encourage persevering effort, and lead us to give the child the benefit of the doubt in all cases where the death of the mother is well established. It is probable, owing to the temperature of the mother's body, that the asphyxiated child will retain its vitality much longer within the uterus than outside of it. Aveling believes that the child may thus survive in the womb many hours after the death of the mother. Villeneuve, in a published paper in 1862, reports a number of cases in which it was ascertained that children survived during astonishly long periods. Four were saved by the immediate performance of the Cæsarean operation. Five were extracted alive after a lapse of ten to thirty minutes. Two children were saved after the mother had been dead two hours; one after two and a half hours, one after three hours, and one after four and a half hours. In referring to these latter cases, Tarnier remarks: "Although the operation is generally useless at a later moment, it ought, nevertheless, to be performed, because some cases, whose authenticity I cannot vouch for, would seem to prove that the child's life may remain intact for ten, fifteen, or even twenty-four hours." Charpentier, one of the latest French authorities, is disposed to discredit these cases, however, and claims that none of them are sufficiently authentic to merit belief.

In all cases when it becomes necessary to effect post-mortem delivery we have the choice of two methods: we may resort to hysterotomy or else to forcible delivery through the natural passages. When death occurs during labor, and we find the os well dilated or dilatable, we may readily perform version, or if the head be within reach, forceps may be applied. The distressing circumstances requiring either operation will often prompt friends to interfere, and prevent any interference on the part of the physician. His duty, however, is plain, and nothing should deter him from at least urging an immediate operation if he is satisfied that the woman is dead, and that there is hope for the child. By far the simplest and safest method of rescuing the child is by laparotomy, but this may be interdicted by friends who, at the same time, might not object to an attempt *per vias naturales*. In choosing between these methods of delivery it should not be forgotten that several instances are recorded in which the terrible blunder has been committed of opening women who were not really dead.

Some writers have gone so far as to advise a resort to forcible delivery whenever the mother is *in extremis*. Such an idea, however, except under peculiar circumstances, is revolting, and should be repudiated. We quite agree with Charpentier when he says, should the woman be *in extremis:* "Respect her condition, and do not hasten her end by maneuvers which may not save the child. Once the mother is dead, however, act quickly in the interests of the child.

In *accouchement forcé*, we should not lose sight of the fact that the uterus is endowed with the power of independent contraction after death, a property which greatly aids the physician in effecting delivery, notwithstanding he is deprived of assistance through

the cerebro-spinal system. Where the pelvis is ample, he may overcome any rigidity or resistance in the soft parts, if necessary, by free incisions. It is a recognized fact that the body of the uterus is under the dominance of the sympathetic, while the chief supply from the cerebro-spinal system of nerves is distributed to the cervix and external os. The effect of somatic death, therefore, is to paralyze the latter class of nerves, and hence to produce a relaxation of the outlet to the womb, rendering those parts readily dilatable, and thus, in many cases, preparing the way for artificial delivery.

As to the influence of death upon the uterus, the fact that the womb does not cease its muscular activity when the vital spark departs from the body is so well known as scarcely to need an argument. Dewees says: "However much this circumstance may excite our surprise, or challenge our belief, it is, nevertheless, authenticated by various testimony." We may add that this power of post-mortem contraction has been observed repeatedly in lower animals, as well as in the human subject. Harvey observed it in the doe, William Hunter in the cat and rabbit, Mueller noticed it in the uterus of the rat and oviduct of the turtle; while Tyler Smith has seen it in the guinea-pig and other animals. It has been observed in women in very numerous instances where the Cæsarean operation has been practiced shortly after death, and also where the hand has been passed into the uterus for the purpose of turning or delivery of the afterbirth. Montgomery, Levret and others cite cases in which the uterus not only contracted down upon the child during artificial delivery, but in which it was subsequently difficult or impossible to introduce the hand for the purpose of securing the placenta. These facts would indicate that the uterus is capable of exerting a very powerful influence in the post-mortem expulsion of its contents; a force which has been variously estimated at from five to eighty pounds. True, in most of the computations of this power in the living subject, it has been difficult to eliminate the factor of coördinate muscular assistance, but when we come to reflect that paraplegic women have brought forth children, we must concede that parturition is mainly accomplished by uterine effort. Playfair adduces a most practical and conclusive argument in support of this position. He says: "There are many facts in the history of parturition which make it certain that the chief factor in the expulsion of the child is the uterus. Among these may be mentioned occasional cases in which the action of the abdominal muscles is materially lessened, if not annulled—as in profound anæsthesia, and in some cases of paraplegia—in which, nevertheless, uterine contractions suffice to effect delivery. The most familiar example of its influence, however, and one that is a matter of everyday observation in practice, is when inertia of the uterus exists. In such cases no effort on the part of the mother, no amount of voluntary action that she can bring to bear on the child, has any appreciable influence on the progress of labor, which remains in abeyance until defective uterine action is reëstablished, or until artificial aid is given." We thus see that while, in the dead woman, the power of uterine contraction is temporarily preserved, the rigidity in the soft parts, through which the child has to pass, is reduced to a minimum, the tendency being to push the fœtus in the direction of least resistance.

This brings us to the consideration of spontaneous post-mortem parturition, a phenomenon which is now recognized by universal obstetrical authority. Dilatation of the os and the commencement of labor is often excited *in articulo mortis*, as has been demonstrated both in the human subject and in the lower animals. This tendency to the precipitation of the parturient process in the dying is doubtless greatly modified by the mode of death. Many diseases and accidents, such as coma, apoplexy, cholera, or in fact any condition tending to deoxidize the blood, will promptly excite uterine activity. Such being the condition of things at the moment of death, the occurrence of *posthumous* extrusion of the fœtus should not be a matter of surprise, when we reflect that the uterus is capable of vigorous post-mortem contraction, that the uterine contents are subjected to *rigor mortis*, and finally to very powerful gaseous pressure, the result of decomposition. This latter must prove a most important factor, especially in cases of early pregnancy. At a recent inquest held in this city upon the body of a young woman, far advanced in decomposition, the uterus was found inverted and protruding from the vaginal outlet, while a fœtus of about three months, with its membranes, was discovered in the clothing cut from the corpse. This case has created some controversy, but it would not seem to be unique, since, as Tyler Smith remarks: "Cases are related in which the fœtus has apparently been expelled some days after the death of the mother by gaseous distension of the abdomen." Tidy, in his "Legal Medicine," vol i, p. 85, says: "It is recorded that gases generated in the abdomen have been sufficient to force fæces from the bowels, urine from the bladder, and even a fœtus from the uterus." Montgomery remarks that "The occurrence of delivery after the life of the mother has become extinct, and consequently effected by the independent contractile power of the uterus, has been attested by so many authors of established credit, that we cannot refuse it our belief; having received the testimony of Fodéré, Buffon, Leroux, Levret, Baudelocque, Bichat and others." Prof. Hermann, of Berne, relates the following case in point: "On the third day after the death of a young woman who was in the sixth month of pregnancy, the nurse heard a loud noise proceed from the corpse. A physician was immediately sent for, who on his arrival, found the deceased had brought forth twins, which were enclosed in a membrane quite entire, and not in the least putrid. The placenta only appeared to have suffered from the effects of putrefaction."

In a discussion of this subject before the Medico-Legal Society of Paris, Pinard related the case of a young woman who died in July, 1872, at about the fifth month of pregnancy. When the body was raised to be placed in a coffin thirty-six hours after death, a fœtus fell from between the legs of the corpse. On examination the uterus was found inverted and pro-

truding from the vaginal outlet, with the placenta still adherent. In the Transactions of the London Obstetrical Society for 1872, Dr. Aveling reports thirty cases of posthumous birth. In one of these cases the child was born alive. The same writer concludes as the result of his investigations, that the uterus may expel its contents after death even though there be no preëxisting symptoms of labor; also that expulsion of the placenta, evolution of the fœtus, prolapse, inversion and rupture of the uterus may all take place post-mortem.

As before remarked, these cases are chiefly interesting as matters appertaining to medical jurisprudence. But they are not difficult to explain when we consider the various forces which are brought to bear upon the uterine contents both at the moment of death and subsequently thereto. And it is quite likely that could the grave reveal its secrets, instances of spontaneous post-mortem parturition would be found far more frequent than is generally supposed.

By no means the least interesting feature connected with posthumous delivery is the occasional occurrence of inversion of the uterus. When this condition was first called to the attention of the profession, it was looked upon as a very remarkable phenomenon, not likely to occur spontaneously, and hence signifying some suspicious outside interference. This was the interpretation hinted at by Pinard in the case related by him before the Medico-Legal Society of Paris, and endorsed by Taylor in his well-known work on "Medical Jurisprudence." But now that there is other authority for believing that inversion can occur spontaneously, even in the earlier months of pregnancy, we are compelled to seek an explanation in the physical conditions which naturally follow death and attend upon decomposition and gaseous distension of the abdomen. We have already seen that the immediate effect of somatic death is to relax the circular bundle of muscular fibres which surround the cervical zone of the uterus, while the muscles of the fundus and body retain their activity, the effect being to force the body of the organ down through the patulous and passive os and cervix, thus according exactly with the *modus operandi* of this accident in life, as elucidated by Prof. Isaac E. Taylor, of New York, when he declares that "spontaneous active inversion of the uterus rests upon prolonged natural and energetic action of the body and fundus; the cervix, the lower part, yielding first, is thus rolled out, or everted, or doubled up; as there is no obstruction from the contractility of the cervix, which is at rest, or functionally paralyzed, the body is gradually, sometimes instantaneously, forced lower and lower, or inverted."

Even where inversion is not completed during the period of active contraction of the fundus and body of the uterus immediately following dissolution, it is quite easy to conceive that the process may be thus commenced, and a physical condition brought about which would render complete inversion of the organ both natural and easy, as the result of the pressure brought to bear through subsequent decomposition upon its flaccid and yielding walls.

NOTE.—Since reading the foregoing paper, Dr. M. H. Post has informed me that in 1872, while he was an *interne* at the Female Hospital in this city, a case of post-mortem parturition occurred at the institution, a case which bears out the point I make, that uterine contractions are frequently excited *in articulo mortis*. In this instance a woman about seven months advanced in gestation died of acute pneumonia. There were no symptoms of labor prior to death, but a short time afterwards it was discovered that a child had been born, which breathed a few times after being expelled.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Twelfth Annual Meeting, held in the Hall of the Academy of Medicine, New York, September 13, 14 and 15, 1887.

(*Concluded from page 538.*)

THURSDAY, SEPTEMBER 15,—THIRD DAY.

DR. A. MARTIN, of Berlin, said that the principal objection to the dropping of the pedicle is the danger of hæmorrhage. This danger he thought did not exist. In Berlin it is the practice to treat the pedicle with Esmarch's constricting apparatus. In removing the body of the uterus, a V-shaped excavation is made in the cervix. The upper portion of the cervical canal is then dissected out, and the lower portion carefully disinfected. The cavity thus formed is brought together with sutures. Next the two flaps of the cervix are united, and then the edges of the peritoneum are brought together. In this way danger of hæmorrhage is avoided. He thought that the method of fixing the pedicle will have little influence on the development of sepsis. Many of these patients die from the effects of their disease. The intra-peritoneal method of treating the pedicle is certainly the ideal method. Up to the end of 1886, he had had 84 supra-vaginal amputations of the uterus. Of this number 10 died of sepsis and 17 died of collapse following embolism. This series included a number of very unfavorable cases. Of his last 30 supra-vaginal hysterectomies he had lost three.

DR. A. R. SIMPSON, of Edinburgh, thought that we could not say that either method of treating the pedicle is the best in all cases. Each case must be decided by the conditions met with in that particular case. He thought that in the treatment of fibroid tumors the clamp would hold its ground, for the reason that in this way the pedicle can be secured in a much shorter time, and this is an important point. Dr. Bantock had objected to the use of iron. He agreed with him that the solution of the perchloride should not be used, for it is difficult to confine a liquid to the desired point, but the persulphate in the form of a powder does not offer this objection. He had used this in combination with iodoform and bismuth powdered over the stump with entire satisfaction.

DR. H. MARION SIMS, of New York, had employed the extra-peritoneal method in the hysterectomies which he had performed. He had seen his father

employ the intra-peritoneal method with such unfavorable results that he had feared to try it. He had had eight cases, of which two died of sepsis the result of sloughing of the stump.

Dr. Mathew D. Mann, of Buffalo, had had six cases in which he had removed the uterus or fibroid tumors from the uterus. In the first case where he removed a fibroid tumor weighing fifteen pounds, he encircled the pedicle with a ligature and dropped it. Six hours later the woman was in a state of collapse from hæmorrhage. He opened the abdomen and secured the pedicle with a wire clamp and the woman recovered. Since then he has always used the clamp. All his cases have recovered in the after treatment of the stump. He rubs it with iodoform, packs cotton around it, and leaves it exposed to the air. In this way it dries quickly and becomes perfectly hard.

Dr. Bantock in closing the discussion, calls attention to the fact that while his mortality from the extra-peritoneal method of treating the stump had been 12 in 72 cases, that of Dr. Martin in the intra-peritoneal method had been 27 in 84 cases. The number of cases is, however, not large enough to be of much value. The proportion of septic cases with the intra-peritoneal method was greater than with the extra-peritoneal method.

Dr. Robert Battey, of Rome, Georgia, read a paper on

BATTEY'S OPERATION; ITS MATURED RESULTS.

In August, 1872, the author performed his first operation for the removal of the functionally active ovaries for the relief of otherwise incurable troubles. Up to the present time there have been no statistics as to the ultimate effect of the operation. Reports have been given showing the immediate results, but none showing the results on the affection for which the operation was performed. All the cases reported in this paper had been traced carefully up to the present time; they were all the subjects of a complete Battey's operation, and had all been operated on a year or longer. The following conclusions were presented:

1. The change of life is the most important factor in securing the complete result of this operation.

2. In exceptional cases the cure almost at once follows the operation, but in the vast majority of cases the patient must pass through the ups and downs incident to the change of life before the restoration to health is complete.

3. The length of time required to pass through the nervous and physical perturbation attendant upon the change of life is variable. It may be one year or it may be three or five years.

4. Of the cases operated on a few were, no doubt, badly selected, and the proper selection of cases is a problem yet to be solved.

5. Patients who have become addicted to the habitual use of morphia, opium, chloral or alcohol, cannot be restored to health until the pernicious habit is abandoned.

6. Cases which are the proper subjects of this operation if allowed to suffer eventually, reach a stage where they became absolutely incurable by any operation.

7. In a number of cases the patients were in no wise benefited by the operation. In several of these the indications seemed clear and unmistakable.

8. In some cases neuralgic pain remained. How much this was due to an unabsorbed ligature was a question to be considered.

9. A careful analysis of the cases seems to show that the removal of the tubes with the ovaries had no influence in the establishment of the menopause, the only effect of their removal being on the disease of the tubes themselves.

10. The operation is not an infallible one. The percentage of failures recorded is a notable one, but when it is remembered that the cases included are only those otherwise incurable, each case cured is a positive gain. A like percentage of cures in cases of cancers of the uterus or of cancer of the breast would be an achievement of the greatest magnitude.

Dr. A. W. Johnstone, of Danville, Ky., read a paper on

THE INFANTILE UTERUS.

He called attention to the fact that the uterus was composed of two distinct portions, the body and the neck, the relation between the two being almost the same as that between the stomach and the pylorus. The non-development of the uterus may result from various causes such as injury, etc. The growth and function of the endometrium was referred to at length. The author had discovered a branch of the sympathetic nerve entering the uterus and the attachment of the Fallopian tube, and he thought it probable that the uterus received its physiological orders. He held that it was not the removal of the ovaries and and tubes that brought on the change of life but it is the neurotomy which the removal of these organs necessitates. From this he argued that the arrest of the growth of the uterus was in all probability due to interference with this nerve supply. An acute neuritis may often pass unrecognized. One of the most marked symptoms in these cases is pain resulting from the efforts of the endometrium to perform a function for which it is not capable. In the management of these cases it seems that in some of the simpler ones a certain amount of benefit is derived from the use of stem pessaries and from galvanism. In the majority of cases of corporeal deficiency he considered it undesirable to induce the menopause, but in some cases where the ovaries remain large and tender this operation may be resorted to. In conclusion the author said "if we wish to have a clear idea of the physiological position of the uterus we must emancipate it from the thraldom of the ovaries in whose secure grasp it has been held for the last fifty years."

Dr. R. S. Sutton asked if Battey's operation consists in the removal of the ovaries alone and if in the 54 cases reported the removal of the ovaries alone brought on the menopause in 50 cases?

Dr. Theophilus Parvin asked: Does Dr. Battey find the ovaries invariably diseased and how often is there associated disease of the tubes?

DR. LLOYD ROBERTS, of Manchester, England, asked Dr. Battey as to the condition of the uterus in the cases reported.

DR. WM. M. POLK asked what is the condition of the ovaries that demands removal? Can we after the abdomen is opened, tell by the appearance of the ovaries whether they should be left or removed?

DR. BANTOCK said that he had always understood Battey's operation consisted in the removal of the perfectly normal ovaries. He asked if this is the correct idea.

DR. BATTEY, in replying to the various questions, said that he did not restrict the term Battey's operation to the removal of the ovaries. The removal of the ovaries is not a necessary constituent of the operation. Battey's operation consists in the induction of the menopause, no matter in what way it is brought about. The removal of the ovaries does not always bring about the menopause; the removal of the ovaries plus the tubes, does not invariably cause the menopause; the removal of the ovaries plus the tubes, plus the uterus does not always bring about the menopause. In his experience the ovaries are always diseased, but this is simply an accident of the operation; the operation is not done for the removal of diseased ovaries. Battey's operation is not normal ovariotomy. He entirely repudiated that term. As a rule he removes only the ovaries, but in a small proportion of cases he removes the tubes, but only when the tube is the seat of positive disease such as pyo-salpinx or hydro-salpinx. The condition of the uterus varies in each case. He does not insist upon visible changes in the ovary to justify its removal but rests for his justification on the urgent necessities of the case and on the fact that nothing else effective has been proposed. He does not operate until all other measures have failed.

DR. THEOPHILUS PARVIN, of Philadelphia, read a

NOTE ON THE IMPORTANCE OF THE USE OF ANTISEPTICS IN PRIVATE OBSTETRIC PRACTICE.

The question as to the necessity for the use of antiseptics in hospital practice has been settled, but private practice their use is often omitted, chiefly perhaps on account of the trouble and expense involved. The puerperal woman should be as carefully treated in private practice as in the hospital ward. While an obstetrician may attend many cases of confinement without a death from septicæmia yet he may have had many cases in which the woman had been crippled as a result of this affection. The day is coming when if a case of puerperal septicæmia occurs in the practice of an obstetrician who does not employ these precautions he cannot escape the censure of his professional brethren or of his own conscience. In order to facilitate the use of these agents the author had prepared a small case containing articles often required in the treatment of a case of confinement. The case contains corrosive sublimate tablets, strong silk for ligating the cord, antiseptic catgut, laudanum, ergot, carbolic acid and tablets of per sulphate of iron. There is also a flexible catheter, tenaculum, laryngeal tube, needle holder, scissors, lancet, needles and silk-worm gut for closing tears of the perineum and within the vagina.

DR. LAWRENCE, of Manchester, Eng., pursues the following plan: During the progress of the labor the vagina is several times washed out with a warm solution of carbolic acid 1:200. Within half an hour after the removal of the placenta he inserts a suppository of iodoform containing 25 grains. This is then used night and morning and the discharge remains inoffensive.

DR. A. R. SIMPSON, of Edinburgh, called attention to the value of turpentine in cleansing the hands. Even after the examination of a case of cancer the use of turpentine will render the hands perfectly clean.

DR. REED, of Glasgow, said that he never examines a woman without using antiseptics. He carries in his pocket papers containing 10 grains of the bichloride of mercury and dissolves one of these in a pint of water and uses in for washing his hands. As a lubricant he uses a preparation consisting of 3 parts of pure soft soap, 1 part of glycerine, and 5 per cent. carbolic acid. This is kept in a collapsible tube such as painters use.

DR. HOWARD A. KELLY, of Philadelphia, is in the habit of carrying corrosive sublimate put up in gelatine capsules containing 7 grains. This will readily dissolve in hot water or the capsule may be opened and the corrosive sublimate added to the water.

DR. ELY VAN DE WARKER, of Syracuse, N. Y., read a paper on

EXTRA-UTERINE PREGNANCY AND ITS TREATMENT BY ELECTRICITY.

The following case was reported: Mrs. X., æt. 27 years, was married at the age of 24. In 1885 she had an abortion at three months. July 25 she had her last menstruation and August 28 she was taken with severe pain beginning in the pelvis and extending over the abdomen. There was slight collapse which disappeared under the use of morphia. The next day what was taken for menstruation came on. The attacks of pain continued to recur, and on September 17 the decidua was passed. On examination a small tumor was detected to the right side of the uterus and slightly posterior to it. This was about 3 inches long and 1½ inches in diameter. Extra-uterine pregnancy was diagnosed. Severe paroxysms of pain continued to recur, and on October 6 the electrical treatment was commenced. This consisted in the use of the faradic current, a strong induction coil being used. The patient was given ten treatments of half an hour's duration, one electrode being pressed against the tumor in the vagina and the other applied externally. At the end of this time there was no apparent change in the pelvic mass, and the pain continued. On October 20 the treatment was continued one hour, and this was repeated on the following days until three applications were made. After the first of these applications the tension of the cyst was found to be less. This was regarded as a sign that the fœtus was destroyed, and was believed to be a sign easier of recognition than a diminution in the size of the tumor. The paroxysmal pain also

ceased as soon as the tension diminished. In using electricity for this purpose the applications should be repeated until the subjective and other evidences of pregnancy disappear. In this case the patient recovered completely but it was seven months before all traces of the tumor had disappeared.

Dr. John C. Reeve, of Dayton, O., had reported one case of extra-uterine pregnancy cured by electricity. Twenty years ago it was pointed out that sudden and violent attacks of pelvic pain attended with gushes of hæmorrhage almost certainly indicated extra-uterine pregnancy. We have since learned that the expulsion of a deciduous membrane is pathognomic. In the diagnosis of this condition the first thing to do is to determine the probable existence of pregnancy. An important point in diagnosis is that the tumor in the pelvis manifests signs of activity in its circulation and it grows rapidly.

Dr. H. Marion Sims reported a case under his care four years ago in which treatment by electric shock was resorted to. The patient was anæsthetized and twenty or thirty shocks from fifteen freshly charged cells were passed through the fœtal mass. Eight or ten applications of this kind were given at intervals of two or three days. At the end of this time there was noticed a decided lessening in the tension of the sac. The use of electricity was then stopped. At the end of one year there was still some thickening of the cellular tissue. The patient's health has been perfect since the operation.

Dr. James B. Chadwick, of Boston, referred to a case of extra-uterine pregnancy which he treated with the constant current constantly interrupted. This was continued three or four weeks before the symptoms ceased. Five weeks later the fœtus protruded into the vagina and was removed.

Dr. A. Martin, of Berlin, had operated on sixteen cases of extra-uterine pregnancy. The treatment by electricity has not met with much favor in Germany. Tubal pregnancy is the most common form of this accident, and this can be easily diagnosed and easily operated on. He had operated on nine cases of tubal pregnancy and all but one have recovered. In this case the tube had burst and the abdomen was filled with blood before the operation was done. Death resulted from the hæmorrhage. The treatment of the other forms of extra-uterine pregnancy will depend upon the symptoms and the course. In these cases the chief objection is the danger of hæmorrhage from the placenta, but he had experienced no difficulty in dealing with the placenta.

Dr. Matthew D. Mann said the electrical treatment of these cases has advantages over all other methods of treatment. The dangers connected with the use of electricity where puncture is not made, are very slight. If this method fails we can still perform laparotomy.

Dr. Apostoli, of Paris, said that where a case of extra-uterine pregnancy has been diagnosed in its earliest stages, the use of electricity should be tried before resorting to any operative procedure. The faradic current is not to be depended on. He had accidentally used the faradic current on the womb in cases of pregnancy, not knowing that the condition was present, and no abortion has resulted. On the other hand, he had accidentally used the galvanic current under these circumstances, and abortion has been induced. He recommended the introduction of one electrode into the sac, while the other is applied externally, and in this way if a strong current is used the death of the fœtus is assured at one sitting.

Dr. Janvrin, of New York, reported a case of extra-uterine pregnancy in which galvanism was employed. The patient died from bursting of the tube after the third application. He had become convinced that the condition of collapse and colicky pain observed in cases of tubal pregnancy is not due to distension of the sac, but to the rupture of small vessels in the peritoneal covering of the tube. The treatment of these cases is not galvanism, but as soon as we have made our diagnosis we should, on the first evidence of shock or colicky pains, at once remove the tube by laparotomy and thus give the patient a chance of being a well woman.

Dr. Van De Warker said that it has been shown that the use of electricity is not dangerous, and if it fails we can resort to laparotomy. If Dr. Janvrin's view is right we should have hæmatocele, but in his case where there were repeated attacks of pain there was no evidence of hæmorrhage. With reference to the recommendation of Dr. Apostoli, he thought that the introduction of an electrode into the sac would be as dangerous as laparotomy.

Afternoon Session.

Dr. Frank P. Foster, of New York, read a paper on

vaginal injections in sims' posture.

The value of large vaginal injections of hot water in the treatment of inflammatory conditions of the pelvis is now recognized. Even when the rules ordinarily laid down are faithfully carried out it is possible that the efficiency of this measure may be still further increased. The main desiderata are the penetration of the water to a position closely contiguous to the seat of the disease, and its application in a quantity sufficient to secure the maximum action of the heat. To fulfil these requirements the speaker had used the injections with the patient in the Sims' posture, or rather in a posture somewhat more prone than that of Sims. With the woman in the dorsal position the quantity of water in the vagina at one time is decidedly smaller than that which is required to fill the canal when it is distended by atmospheric pressure, as occurs when opening the introitus with the patient in Sims' posture. It seems reasonable to suppose that the effect of a large quantity of water in the vagina will be greater than that of a small quantity. When the injection is concluded this large quantity of water can be retained for some time. The greatest advantage is, however, the gravitation of the abdominal contents towards the diaphragm, thus bringing the hot water in closer relation with the diseased parts. With the ordinary appliances there is some objection to this procedure,

but with the vaginal douche described some years ago by the author, no difficulty is experienced.

DR. CHARLES JEWETT, of Brooklyn, read

A NOTE ON THE TREATMENT OF PUERPERAL ECLAMPSIA,

in which he called attention to the value of veratrum viride in this class of cases. Its use in convulsive affections has been known for many years, but has not been generally recognized. Veratrum viride, if a reliable preparation be employed, is a safe, prompt and efficient remedy in convulsions. Its value in eclampsia seems to depend on its effect on the vaso-motor tonus. Used with proper precautions veratrum viride is perfectly safe. A careful search of the literature reveals no death due to its use in the treatment of convulsions. It is important that the patient should be kept in the recumbent position while taking the drug. The fluid extract of the rhizome is the best preparation. Hypodermic injection of the drug is the only reliable way of bringing the circulation promptly under its influence. The average dose is 10–20 ♏. The smaller dose repeated in half an hour will usually suffice. The guide to the use of the drug is the frequency of the pulse. Experience has shown that no convulsion will occur if the system is sufficiently under the influence of the drug to hold the pulse under sixty per minute. The average time required to develop the effect of a single dose of the drug is half an hour. The average quantity given does not exceed twenty to thirty minims in all. Twenty-two cases were reported in which this treatment had been employed. Of this number six died, three by complication and three from the eclampsia. In the fatal cases from twenty-four to thirty convulsions had occurred before the treatment was begun. In most cases other remedies, such as chloroform and hydragogues, were employed, in addition to the veratrum viride. The most unpleasant effect noticed has been nausea and depression, but these were only transient.

OFFICERS FOR THE ENSUING YEAR.

President—Dr. Robert Battey, of Rome, Ga.

Vice-Presidents—Dr. Jas. R. Chadwick, of Boston, and Dr. A. Reeves Jackson, of Chicago.

Secretary—Dr. Joseph Taber Johnson, of Washington.

Treasurer—Dr. Matthew D. Mann, of Buffalo.

Council—Drs. Frank P. Foster, New York, C. D. Palmer, Cincinnati, Jas. B. Hunter, New York, and R. Stansbury Sutton, Pittsburg.

The following new members were elected: Drs. Howard A. Kelly, Philadelphia, Cornelius Kollock, South Carolina, Bache McE. Emmet, New York, and H. T. Hanks, New York.

The report of the committee of conference with reference to the formation of a *Congress of American Physicians and Surgeons*, was received, but the recommendations of the joint committee were *not* adopted.

The Society then adjourned to meet in Boston on the Third Tuesday of September, 1888.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Special Meeting, September 19, 1887.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

MR. LENNOX BROWNE, F.R.C.S., of London, read a paper on

AN UNRECOGNIZED CAUSE OF MANY THROAT AILMENTS.

In accepting the very flattering invitation of your President to speak a few words to the members of the Philadelphia County Medical Society, it appeared to me both more becoming and more profitable to offer you some practical remarks explaining the *rationale* of some of the commoner of throat ailments, than to attempt to magnify the office of the laryngoscope by the relation of rare and wonderful cases. I was the more inclined to this view because I was well aware that, through the assiduous industry and well-known skill of your President and other members of your Society, you have for some years been kept thoroughly posted in all that is new in laryngology. It is now some ten years since first I sought an objective explanation of the condition known as *globus hystericus*, and since I commenced to make a systematic examination with the laryngoscope of every patient who came to me with this symptom. The result was communicated in a paper to the Congress of Laryngologists held at Milan in 1880. I found that but very few cases, indeed, are of a hysterical character—that is, of the nature of a phantom sensation—though uterine or ovarian disorder is a not infrequent predisponent, or, at least, concomitant of the throat condition in the female sex.

Extending the term *globus hystericus*, I find that, with hardly an exception, all and every other subjective sensation in the throat is symptomatic of an objective cause. The chief of such feelings are those of a heat, a prickling, a swelling, a weight, a straw, a hair, or other foreign body. A few patients —one especially, a hale farmer—have complained of a feeling of intense cold, which is sometimes relieved, sometimes aggravated, after food-taking. In some instances there is actual pain with spasm, cramp, and a sensation of choking, and not infrequently there is cough; this symptom varies in degree from a slight hacking, to the loud hyena-like bark known as nervous laryngeal cough. Many of the cases of the so-called laryngeal vertigo, or as I prefer to call it, of laryngeal epileptiform seizures, are capable of explanation and cure, on the lines I am at present taking. On examination of the throat of a patient with symptoms such as I have described, one may or may not see chronic congestion and relaxation of the fauces and uvula, enlargement of the tonsils or obstruction by caseated material of the orifices of the crypts, granular pharyngitis, or even laryngeal hyperæmia. Where any one of these conditions is present, treatment thereof may or may not give relief; but none of them represents the class to which I would draw your attention, namely, that in which there is no generally recognized morbid state of local significance.

The results of laryngoscopic investigations in my hands have shown that there is:

1. A varicose, and even truly hæmorrhoidal, condition of the veins at the base of the dorsum of the tongue, sometimes at the under surface and sides, in which last case it may be symptomatic of mitral insufficiency, or of severe hepatic derangement, or even of cerebral lesion. There is often a similar varicose state of the vessels in the superior surface of the epiglottis.

2. An enlargement of the circumvallate papillæ at the back of the tongue, causing the epiglottis to be hindered in its movements—imprisoned, as your President first called it.

Just drawing attention to the fact that the structure of these glands is very similar to that of the tonsils, I may mention that in a few instances I have seen actual blocking of the orifices, similar to the condition known generally as chronic follicular tonsillites.

I may also note that it is not possible to see these things either with a tongue depressor or in the laryngeal mirror as ordinarily employed. Many observers, especially beginners, seem to consider that their sole aim is to see the vocal cords, and, if these are sound, they write down, "larynx normal;" but they omit to look well to the frame-work. To see this condition of lingual varix and glandular hypertrophy, the mirror must be placed quite high up in the throat.

Where, as is often the case, there is no actual or noticeable enlargement of the thyroid gland, it will be observed, on passing the hand gently over the front of the throat, that there is a distinct fulness of the thyroid isthmus. If the least pressure be made at this situation, the patient—not necessarily a female—will complain that the abnormal sensation is at once excited, and, on being questioned, will admit that when it occurs the collar is felt to be too tight for the neck.

Inquiring into the general health, and happily failing to find any of the more serious lesions to which I have alluded, it will be noted that habitual constipation and a general defective circulation are both frequent symptoms; while in others there will be concomitant evidences of a varicose diathesis, as rectal hæmorrhoids, varicocele, or varicose veins of the extremities.

In females the menstrual flow is often morbidly frequent or excessive, and there are other evidences of an enfeebled vasomotor control. Abuse of alcohol and tobacco are excitants of the condition; and in the cases of singers or public speakers, defective methods of filling the lungs—forcing the lower registers upward, or other functional fault which may lead to undue strain on the palato-pharyngeal muscles and engorgement of the vessels in this region—are fruitful predisponents.

In this connection, I may refer to the accurate explanation offered by your fellow-citizen, Dr. Carl Seiler, of the etiology and pathology of chronic pharyngitis when occurring to voice users.

Some of those obscure cases which come under our occasional notice, of the presence of small quantities of blood in the mouth, or of the taste thereof on rising from sleep, will be explained by the leakage of one or other of these enlarged and hæmorrhoidal venous capillaries in the region now under consideration.

A few words as to treatment. If the case is not of long standing or of aggravated character, correction of the main constitutional cause—cessation of the faulty method of voice production, or prohibition of a vicious habit or indulgence—may be sufficient to effect a cure, but this is rarely the case. Of remedies, I give chalybeates and aperients with digitalis or ergot, as may be indicated. Locally, astringent applications, especially of chloride of zinc or perchloride of iron, are by no means without avail; they can be applied by the patient himself. Gargles as ordinarily employed are useless, and occasionally are productive of exacerbation of the symptoms. Not so if employed by the method known as that of von Troeltsch. Of lozenges, I find those of muriate of ammonia much more active in leading to resolution of the venous congestion, than those of red gum, rhatany, etc.

Recent investigations show that the astringent properties of tannin have been exaggerated. Where the uvula is relaxed, the snipping of an elongated portion, especially if other functional or constitutional faults are corrected, may lead to a cure; but in a certain proportion of patients in which the promises of the specialist as to the good effects to be gained by the procedure are not realized, the cause of failure will be found in non-recognition of the various vessels. Treatment of these is best effected by the galvano-cautery point, and it is necessary to seal each individual enlarged vessel. For this purpose it may be necessary to make more than one application. Lastly, there is often a hyperæmic tumefaction of the vessels, glandules, and submucous tissues of the pharynx, naso-pharynx, and turbinated bodies; these will also be best treated by galvano-cautery.

In conclusion, I would say, that in case it may be objected that the conditions I have described are but representative of an advanced chronic congestion, I do not deny that such occasionally may be the case. In the majority, however, there are no such antecedents; and where the two exist, the practitioner will fail to cure his pharyngitis, or what not, until he has recognized and treated the varix.

Dr. Carl Sieler said: I quite agree with the speaker, that the *globus hystericus* is rarely of purely imaginary origin. Some chronic inflammation of the upper part of the upper air passages usually accompanies this distressing condition. As he truly says, pharyngitis is one of the most common causes of this symptom. At the same time the pharyngitis is to my mind, as a rule, the consequence of remote causes which may be looked for in one of three different directions—in a disturbance of the gastric system, in a disturbance of the respiratory function of the nose and naso-pharynx, and, finally, and most commonly in public speakers and singers, in a faulty use of the organ of the voice. This latter condition is frequently met with in those who simply

use the voice for ordinary conversation. The constant irritation thus produced leads to hyperæmia and chronic inflammation, which extends upward, rather than downward, into the trachea. In the treatment of the condition described, I think that little can be accomplished by the application of remedies to the apparent seat of the disease, but that the cause must be looked for and removed.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, September 5, 1887.

THE PRESIDENT, WM. T. BELFIELD, M.D., IN THE CHAIR.

DR. CHARLES W. PURDY read a paper entitled

THE SPECIFIC GRAVITY OF THE URINE, AND ITS RELATIONS TO STRUCTURAL DISEASES OF THE KIDNEYS.

(See THE JOURNAL of Sept. 10, p. 325.)

DR. J. J. M. ANGEAR: I think the point that has been brought out with reference to the apparent and real specific gravity, is of great value, but there is some question in my mind as to the propriety of the use of these terms; going back of that it might be necessary for us to know what the urine is. If the urine consists of all the water that passes out of the body, whether it passes through the kidneys and finally through the urethra, or whether it passes out through the skin or into the alimentery canal and then passes out, I can readily see the propriety of the use of the term apparent and real specific gravity, but I doubt if our present knowledge of pathology would enable us to occupy so large a field. If the urine is that watery excrement which passes through the kidneys and out through the urethra then I don't see that we can use the term apparent and real specific gravity because the specific gravity of the fluid the patient passes at any time is its real specific gravity. The term may be covered better by expressing it as the solid matter contained in the urine; it would perhaps be less objectionable and would not be so likely to lead some of the junior members of the profession astray as the term real and apparent specific gravity. I am sorry that the writer did not bring out a little more the nerve influence upon the function of the kidneys. I think we may have a nervous condition where the specific gravity may be increased or diminished; we may have albumin in the urine as the result of a nervous condition. We have noticed it more particularly perhaps in what is called hysterical patients, and in all cases of nervous excitement. I think you will find the specific gravity of the urine diminished in all young people who are first called upon to appear in public, whether it be the child in school reading a composition or declaiming, or the young politician attempting his first speech, or the teacher in a medical college with his lecture; these mental conditions have a decided influence upon the specific gravity of the urine (the apparent specific of Dr. Purdy would call it) because there is an increased amount of water; but that water may under other circumstances, as in cases of fever, or great mental excitement, or some nervous disease, pass out through the skin as perspiration, but that very water would pass through the kidneys if that condition did not exist. So I think it would be well for us to take into consideration the propriety of the use of these terms and at the same time we must not forget the physiology of the nervous system and the function of the kidney.

DR. W. F. COLEMAN: There is a question I would like to ask. It is somewhat unsatisfactory to take the specific gravity with the urinometer, in fact, I believe the only perfectly accurate way of taking specific gravity is to take it by weight of volume. I want to ask if Dr. Purdy considers the urinometer sufficiently accurate for all practical purposes? There is a condition of the urine that we find occasionally —it contains a large quantity of fat. Does that indicate renal organic disease, or is it likely to induce it? How does it usually affect the specific gravity?

DR. H. N. MOYER said he was greatly interested in Dr. Purdy's paper, as it was upon a subject to which he had paid special attention for some time. The author lays great stress on the specific gravity of the whole quantity of urine passed during twenty-four hours, *i. e.*, the total solids excreted by the kidneys; as an indication of the greatest diagnostic value, in estimating the degree to which the structural integrity of the kidneys may be involved. He thought he had not overstated the importance of the sign, when he regarded it of more consequence than any other symptom of kidney disease. A case had come under Dr. Moyer's observation suffering from spinal concussion, it appeared to be a simple case and one unusually clear in its symptoms and history. The case was to become the subject of a medico-legal inquiry, and the urine was examined as a matter of routine. It was found to contain one-sixth by volume of albumin and gave a slight reaction for hæmoglobin. The possibility of beginning Bright's disease, the symptoms of which had been mistaken for spinal concussion, was apparent. An examination into the quantity of solids daily excreted showed them to be about normal. On this single indication the diagnosis of spinal concussion was affirmed, and the subsequent history of the case confirmed the conclusion. A point of practical importance is the difficulty patients have in collecting the urine, and the necessity of measuring it by the physician. I have in my office several wide "salt mouth" glass stoppered bottles of a capacity to contain the entire urine for twenty-four hours. They are graduated in ounces, (a paper scale attached to the side of the bottle answers every purpose). The patient passes the urine directly into this bottle, and the quantity is noted; a portion of the urine may then be sent to a physician for estimation of the total solids, or further examination.

The coefficient mentioned by Dr. Purdy, of 2.33 is a good one but it necessitates estimating the quantity of urine in cubic centimeters, and the use of a four-part equation. The matter has been simplified by Prof. Haines, who recommends as an equivalent the

multiplying the last two figures of a specific gravity expressed in four figures by 1.1 the result to be multiplied by the whole number of ounces to obtain the total solids expressed in grains. This formula I have found sufficiently accurate in practice.

Dr. C. W. Purdy, in closing the discussion said: In reply to Dr. Coleman's question about the method of taking the specific gravity; I did not go into that simply because it is thoroughly treated of in several recent works, especially Hoffman and Tyson. The most perfect way is undoubtedly by the balance, the actual weight. The best apparatus made in this country is made by Squibb. If you use a urinometer you will find that they vary very much, they may start off at the standard temperature of 60° F. all right, but they seem to go largely by guess after you get up 5 or 10 degrees. There is a very fair instrument made with thermometer attachment. There is one matter of very great importance if you examine urine freshly passed, as it is usually several degrees higher in temperature than normal. Every 7 degrees rise in temperature will require 1 degree to be added to the specific gravity of the urine, consequently you will have about 5 degrees to add to urine of a temperature of 95° degrees which is about the temperature when passed. If the kidneys are sound they will throw out water and solids in proportion to the man's weight, if diseased they cannot do it. They may do more rapid functional action for a time but they will fall below normal; if the kidneys are essentially diseased the specific gravity must come below the normal. There is another point which is very valuable and which surgeons should take notice of. It is important to observe the specific gravity of the urine before every surgical operation. I think when the specific gravity of the urine is materially below normal it is dangerous to operate in the majority of cases, it may be very dangerous, especially if the urine is deficient in chlorides. I did not go into the elements of the urine excreted, dealing with urea, etc., that would make the question very complicated. I wished to make it simple and easily understood as it is a question inclined to be overlooked by the majority of observers.

Dr. Moyer: I would like to know if Dr. Purdy does not think that the specific gravity can be estimated accurately enough for chemical purposes, by the ordinary urinometer, corrected by the Yale Observatory, if allowance is made for the variation in temperature.

Dr. Purdy: I think it can be.

FOREIGN CORRESPONDENCE

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Diphenylamine a Test for Watered Milk—The Red Cross Conference—Hereditary Ichthyosis—The Cause of Morning Sickness in Pregnancy—Amylene Hydrate, the new Hypnotic—Iodide of Potassium Treatment of Consumption—Dr. Ferrier.

A new and curious test has been discovered by which the smallest addition of water to milk can be detected. It is based upon the fact that all well and river waters contain an appreciable amount of nitrates. They are either nitrates of soda, of potash, of ammonia or of lime, according to the source from which the water is drawn, and when the liquid is evaporated carefully to dryness, the presence of these nitrates can easily be detected in the residue. But there is a means of detecting them without the trouble of evaporating the liquid down to dryness. It has lately been found that drinking-water containing nitrates yields a blue color when a little sulphate of diphenylamine is added to it. This is the new test. In order to carry it out a certain quantity of the milk to be examined is placed in a new porcelain capsule, and a few drops of the new reagent added. The best way of making the experiment is to place first in the porcelain dish about 20 drops of the sulphate of diphenylamine, and then add the same quantity of milk to it; if the latter contain only 5 per cent. of well water of the average quality, a blue line will gradually appear. A solution of sulphate of diphenylamine should be placed at the disposal of every householder, with instructions for use printed on the label. Armed with this and a common lactoscope, the smallest water adulteration would be easy of detection.

At the sitting of the Red Cross Conference which was attended by the Emperor of Brazil, a resolution was adopted requesting the States and Associations which have adhered to the Geneva Convention to carry out the antiseptic treatment of the wounded as soon as they have been removed from the line of battle. It was further decided to thank the various Governments and railway companies for the gratuitous transport of provisions for the benefit of the wounded, and to express a wish for the generalization of those facilities.

Dr. Date has drawn attention to an interesting case of hereditary ichthyosis occurring in a man aged 31, who had the disease well marked on the soles of both feet and the palms of both hands. The family history showed that his great-grandmother on his father's side was the first member of the family known to be similarly affected. Next came her daughters, then the patient's father and uncle. The children of the foregoing mostly suffered in the same manner. The hands and feet appear natural at birth, the disease appearing about two or three weeks later, in every case being strictly confined to the soles and palms of the hands.

Dr. Oliver, of the Hospital for Women, considers that the cause of morning sickness during pregnancy may be due to the nerve centre which regulates the process of assimilation being either in apposition or at least in direct communication with that which presides over the organs of generation. Considering the close relationship that exists throughout life between the two processes of assimilation and reproduction, there can be no doubt that the representative nerve centres act and react upon each other. When, consequently, the uterus becomes the nidus for a developing germinal mass, the molecular disturbances radiated therefrom to the reproductive centre are liable to be transmitted to the pneumo-

gastric as well, and induce either a feeling of nausea or actual emesis. Usually, however, in the course of a few months, through habit, the pneumogastric centre becomes tolerant and the symptom evidencing disturbance at the same time disappears. Dr. Oliver can only suggest that the change from the recumbent to the erect position during sleep renders the whole nervous system more liable to explosive disturbances, as being the reason why the sickness is more especially experienced in the morning.

A new hypnotic called amylene hydrate has recently been rather extensively experimented with. For a man the dose is 3 to 4 grams to secure a sound, calm, refreshing sleep of six to nine hours' duration. The hypnotic action of amylene hydrate is not so energetic as that of chloral hydrate, but stronger than that of paraldehyde. But it affects the heart much less than chloral hydrate does, and it is superior to paraldehyde, inasmuch as it can be given in smaller doses, is easier to administer, and does not impart to the patient's exhalations the disagreeable odor that is remarked when paraldehyde is given. It is stated that as a hypnotic 1 gram of chloral hydrate is as energetic as 2 grams of amylene hydrate. But having less action on the heart, the attention of practitioners will at once be drawn to the new hypnotic. Neither does it appear to produce congestion, and not interfering with the action of the bowels, can be administered in diseases of the digestive organs. It can also be given as enemata when necessary.

Dr. Weaver claims to have carried out and gradually improved a successful treatment of pulmonary consumption for a quarter of a century. The doctor holds that iodide of potassium produces a condition of blood in which micro-organisms, including the tubercle bacillus, cannot live, but no evidence is adduced in his new "Practical Treatise on the Cure of Pulmonary Consumption" to prove that its presence is incompatible with bacillus life, and if, as he suggests in one part of his book, the function of these microbes may be that of scavengers to get rid of effete and exhausted matters, it is difficult to explain why he attempts interference with such useful parasites.

The Balz Medal of the Royal College of Physicians has been awarded to Dr. David Ferrier.

G. O. M.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Resorcin in Pertussis—Cerebral Irritation in Children—Preputial Dilatation as a Substitute for Circumcision—Ignipuncture of the Tonsils—Dermic Cyst of the Scrotum.

The first meeting of the New York County Medical Association after the summer vacation was held the third week in October, when Dr. J. Lewis Smith, President of the Section of Diseases of Children of the Ninth International Medical Congress, gave a review of some of the more important papers which had been presented to that Section of the Congress. These were four in number, one by Moncorvo, of Brazil; one by Jules Simon, of Paris; and two by St. Germain, of Paris.

The first was on "Pertussis and its Treatment with Resorcin," in which Moncorvo, whom Dr. Smith regards as the ablest living authority on whooping-cough, gave an interesting account of the microscopical researches which confirmed his belief in the bacterial origin of this disease. This being demonstrated to his satisfaction, he selected resorcin as the best available remedy for local application, on account of its antiseptic power, its solubility and its lack of acidity. Since 1885 he has been using cocaine as a preliminary to the resorcin, as he found that it lessened the intensity and frequency of the cough before the resorcin had had time to destroy the morbific germs. He uses a 10 per cent. solution of the cocaine and an 8 per cent. solution of the resorcin, and this combination he believes constitutes the best treatment for whooping-cough now at our command.

The paper by Jules Simon was on "Cerebral Irritation in Infants and Young Children." Although many of these cases are no doubt due to such hereditary influences as alcoholism, insanity and syphilis, a considerable number were, he said, undoubtedly attributable to the deplorable mismanagement of children at the breast so often met with. In the treatment of the condition it was necessary that a special and strict hygiene should be enforced, and all sources of excitement carefully eliminated. The child should be kept constantly in the air and removed to the country (preferably the sea-shore) if possible. As to medicinal measures, the bromide of potassium with laxatives as required were all that was necessary, as a rule; the bromide being suspended from time to time for intervals of three days.

Dr. Smith said that the matter referred to was, in his opinion, one of great importance, and also one which had not as yet received as much attention as it deserved. Infants such as were described in the paper were frequently met with in American households, and the symptoms noted were apt to be attributed by the friends to dentition or intestinal worms. The causes of the cerebral irritation, however, were now looked for elsewhere by the more intelligent class of physicians, and it was fully recognized that the gum lancet or the use of vermifuges would only do harm. There could be no doubt that, in addition to hereditary influences, the treatment the infant received had much to do with this nervous excitability, and that the habits of modern society interfered to no small extent with a well regulated management of the nursery. While there are no structural lesions at first in this condition, parents ought to be impressed with the fact that it was liable to result in grave diseases, such as sclerosis or meningitis. In such cases, like Simon, he uses both hygienic treatment and the bromide of potassium.

The first of St. Germain's papers was on "Preputial Dilatation as a Substitute for Circumcision." As the latter was sometimes followed by serious ac-

cidents, it was desirable, he thought, that dilatation should be used in its stead in all cases in which this proceeding was practicable. An examination of the statistics of the subject showed that dilatation was impracticable in only about one in every 300 cases. The dilator he employs is like that of Nélaton, except that it has two blades, instead of three. Gradual and slow dilatation of the preputial orifice is practiced, and afterwards daily movement of the prepuce, alternately covering and uncovering the gland.

The other paper by St. Germain was on "Ignipuncture of the Tonsils," which he believes is destined one day to supersede tonsillotomy. It is, he said, a perfectly safe procedure, and therefore much preferable to the latter. By the aid of a Smith's gag a thermo-cautery is introduced into the mouth and inserted into the tonsil to the depth of 1 centimetre. The operation is repeated every eight days, and from two to four sittings are required; at the end of which time the tonsil is found to be almost completely shrivelled up. It has proved very successful in St. Germain's hands, and although he has employed it now in a large number of cases no bad results have been noted from it.

Dr. Smith said that he had applied to Dr. A. D. Rockwell, the eminent electro-therapeutist, for an expression of opinion in regard to the advantage and practicability of this procedure, and Dr. Rockwell had written that, although the author's description of the method was too brief and vague to enable one to judge definitely of its merits, the matter seemed plausible and worthy of attention. While the galvano-cautery had the advantage over the knife of giving rise to much less danger of hæmorrhage or pyæmia, its application was too painful and required too long a time (six or eight minutes at a sitting), to be successfully resorted to in the case of young children. Ignipuncture, on the contrary, could no doubt be employed with facility, because its action was instantaneous.

In the discussion which followed Dr. Smith's address Dr. C. A. Leale suggested the use of bromide of sodium in the place of bromide of potassium in the cerebral irritation of children, as he had found that the former was much less apt to disagree with the stomach than the latter. As to dilatation of the prepuce, this had long been successfully practiced in America, and St. Germain's paper therefore contained nothing that was known here.

Dr. J. R. McGregor said that in regard to whooping-cough he believed that in addition to the primary cause, there was an intense neurosis present, which it was necessary to control in order to deal satisfactorily with the disease. Almost every physician had some favorite remedy, and personally he had obtained the best results with oxalate of serium, which he gave in 5 grain doses once a day; in exceptional cases repeating the dose at night. He could see no great objection to circumcision, and believed that many of the cases in which diphtheria followed it this was due to carelessness on the part of the operator in regard to instruments, etc.

Dr. J. W. S. Gouley said that when the preputial orifice was very narrow it was not safe to attempt retraction, on account of the danger of producing paraphimosis, which was always a serious matter in children. In such cases there was no question in his mind that, as a rule, excision of the prepuce constituted the last treatment. Dilatation, or, more properly, divulsion, was not an easy operation by any means, and the younger the child was the more difficult it was to perform. It could be most satisfactorily accomplished by means of Trousseaux's tracheotomy dilator; but the procedure was always to be condemned when the prepuce was narrow and indurated.

At the close of the discussion Dr. Alfred L. Carroll read a paper entitled "Mineral Water Miracles," in which he gave a forcible exposition, abounding in lively satire, of the ridiculous claims of some of the mineral waters now in vogue; after which Dr. Gouley presented a dermic cyst of the scrotum (the removal of which had also necessitated that of one of the testicles), in which fatty degeneration had been followed by calcareous infiltration, accompanied with the development of a small amount of osseous tissue, the bone-cells being found present under the microscope. P. B. P.

CYSTOCOLPOCELE COMPLICATING LABOR.

Dear Sir:—In THE JOURNAL of October 15, page 502, appears the report of a case of labor complicated by cystocolpocele, in which the author says he has found but 37 recorded cases. If of value to the profession, allow me to report the following case:

On September 24, 1887, I was called to attend a case of labor at full term. Labor pains had occurred regularly for the past six hours, though light in character. Upon making a vaginal examination, I found a fluctuating tumor about the size of a fœtal head, depending direct from the superior vaginal wall; the tip of the finger could detect the patulous os, but could not reach the presenting part of the child. The tumor was not painful, nor had there been marked desire to urinate. Patient had passed water several times that day.

I suspected a prolapsed bladder, and requested the patient to urinate, and then found that the obstruction had disappeared, with the exception of the shrunken walls, which lay in rugæ on the upper surface of the vagina. No other trouble was experienced, and in about two hours she was delivered of a fine pair of twins.

This was her fourth accouchement, and in the three preceding ones she had been attended by a midwife; never knew of the prolapse, and had experienced no trouble from it.

Respectfully,

A. J. C. SAUNIER, M.D.

Libertyville, Ill., Oct. 20, 1887.

GLEDITSCHINE-STENOCARPINE.

Dear Sir:—The fact, seemingly well proven by the experience of Drs. Seward, Claiborne, Knapp, Jackson, Mitchell and others, that the newly discovered alkaloid, gleditschine-stenocarpine, is largely

like cocaine in its power as a local anæsthetic, has prompted me to determine whether it has a value akin to that drug, as a stimulant in the treatment of opium habitués, and I am now experimenting in this direction, using a 2 per cent. solution exclusively by subcutaneous injection. That cocaine, hypodermically, is a valued aid in treating the opium neurosis is beyond question, in my opinion; but it is not a specific, and should never be used for this purpose by the patient himself, be he physician or layman. Should gleditschine have a similar value, it may be found free from the ensnaring danger of cocaine; though, assuming its stimulant power, this freedom from risk will not be likely, and we shall note, probably, in the not far future, baneful effects from its abuse, and gleditschine inebriety be added to the list of toxic neuroses.

It has been stated by Dr. Seward that he "has observed antidotal effects to gleditschine from morphia;" and Mitchell (W. H.) asserts "it is a direct antagonist of morphine and opium, 10 drops of the 2 per cent. solution neutralizing 1 grain of morphine or 6 of opium." Experiments on rabbits now being made by myself will, it is to be hoped, sustain these claims."

The 2 per cent. solution can be obtained of Messrs. Lehn and Fink, New York City, at a present wholesale cost of $6 an ounce. I shall be pleased to receive and report the experience which any reader of THE JOURNAL may have on this subject. Yours very truly, J. B. MATTISON.

314 State St., Brooklyn, October 15, 1887.

BOOK REVIEWS.

THE PHYSICIAN'S VISITING LIST. (Lindsay & Blakiston's), Thirty-seventh year. 1851–1888, with many improvements. Philadelphia: P. Blakiston, Son & Co.

This visiting list is so well known that no description is needed. Of the various visiting lists it is one of the lightest, strongest, least cumbersome, and most convenient.

SURGERY, ITS THEORY AND PRACTICE. By WILLIAM JOHNSON WALSHAM, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital; Surgeon to the Metropolitan Free Hospital, London, etc. With 236 illustrations. 8vo., pp. ix–655. Philadelphia: P. Blakiston, Son & Co. 1887. Chicago: W. T. Keener.

While in no sense a "short cut to surgery" Mr. Walsham's book seems to be in the main intended as a manual or handbook for the student and practitioner of surgery. The subjects with which every student ought to be thoroughly acquainted are given special prominence, while the rarer forms of injury and disease have either received but short notice or have been entirely omitted. The details of operative surgery and minor surgery and bandaging, with such other things as the student is supposed to be taught practically in the wards, are but briefly discussed.

The first two sections, occupying 119 pages, are devoted to "General Pathology of Surgical Diseases," and "General Pathology of Injuries;" for the introduction of which into a manual the author is to be commended. The illustrations, as a rule, are good, in that they show what they are intended to represent. Many of them are new, and we note with pleasure the conspicuous paucity of many too familiar old ones. The book is a good one, and written in Mr. Walsham's well-known lucid style.

MISCELLANEOUS.

COMMEMORATIVE MEDAL, NINTH INTERNATIONAL MEDICAL CONGRESS.—We learn that a contract has been made with a first-class medalist connected with the United States Mint at Philadelphia, to engrave and stamp the commemorative medal for the subscribing members of the Ninth International Medical Congress. The work is to be executed in the best possible manner. As several months will be required to prepare the dies, members of the Congress who have not subscribed, we presume can still do so on application to Dr. J. M. Toner, 615 Louisiana Ave., Washington, D. C., who has the matter in charge.

TYPHOID FEVER IN CINCINNATI.—Telegraphic dispatches from Cincinnati state there are more than 500 cases of typhoid fever in the City, and that the outbreak of the disease is thought to be due to the condition of the Ohio river, which is much lower than it has been for many years.

FLORENCE NIGHTINGALE, the famous heroine of the Crimea, is reported dying at her home in London, from the effects of her perilous labors during the days in which she devoted her life to the care of soldiers wounded in battle.

DR. JAMES A. GRAY, one of the editors of the *Atlantic Medical and Surgical Journal*, died on October 7, aged 37 years.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 15, 1887, TO OCTOBER 21, 1887.

Major W. D. Wolverton, Surgeon, detailed as member of Army Retiring Board at Washington, D. C., convened by S. O. 78, A. G. O., April 5, 1887, vice Major C. C. Byrne, Surgeon, hereby relieved. S. O. 241, A. G. O., October 15, 1887.

Capt. Edwin F. Gardner, Asst. Surgeon, relieved from duty at Ft. Reno, Ind. Ter., and ordered for duty at Ft. Lewis, Col. S. O. 241, A. G. O., October 15, 1887.

Capt. Jno. J. Cochran, Asst. Surgeon, now on duty at the Presidio of San Francisco, Cal., is assigned to temporary duty at hdqrs. Div. of the Pacific, as assistant to the Medical Director of that division. S. O. 244, A. G. O., October 19, 1887.

First Lieut. C. B. Ewing, Asst. Surgeon, granted leave of absence for one month, on surgeon's certificate of disability. S. O. 112, Dept. Mo., October 18, 1887.

Nathan S. Jarvis, to be Asst. Surgeon, U. S. Army, with the rank of First Lieut., October 14, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING OCTOBER 22, 1887.

P. A. Surgeon H. G. Beyer, ordered to hold himself in readiness for orders to the "Trenton."

Asst. Surgeon S. S. White, ordered to hold himself in readiness for orders to the "Trenton."

P. A. Surgeon F. B. Stephenson, detached from the "Bache," and ordered to the Navy Yard, Boston.

Asst. Surgeon E. P. Stone, detached from the "New Hampshire," and ordered to the "Bache."

Surgeon T. H. Street, detached from the "Patterson" and placed on waiting orders.